

File 350:Derwent WPIX 1963-2006/UD,UM &UP=200638

(c) 2006 The Thomson Corp.

File 347:JAPIO Dec 1976-2005/Dec(Updated 060404)

(c) 2006 JPO & JAPIO

Set	Items	Description
S1	322119	SKIN OR DERM?? OR EPIDERM? OR TRANSDERMAL?? OR STRATUM() CO-RNEUM OR TISSUE OR SUBDERMAL??
S2	6797	JOULE OR JOULES OR MILLIJOULE? ? OR KILOJOULE? ?
S3	94093	CM2 OR CM() 2 OR (CENTIMETER? ? OR CENTIMETRE? ?) (N) (SQUARE OR SQUARED)
S4	175105	NEEDLE? ? OR MICRONEEDLE? ? OR MICROPROTRUSION? ? OR MICRO-PROTRUBERANCE? ? OR MICRO() (PROTRUSION? ? OR PROTRUBERANCE? ?) OR NEEDLESTICK? ? OR INJECT?R? ? OR TROCAR? ?
S5	42416	CUTANEOUS? OR SUBCUTANEOUS?? OR TRANSCUTANEOUS??
S6	9497	(S1 OR S5) AND S4
S7	1493	(J OR S2) (1W) S3
S8	7	S6 AND S7
S9	4	(S1 OR S5) (S) S4 (S) S2
S10	3	S9 NOT S8
S11	10	(S1 OR S5) AND S2 AND S4
S12	5	S11 NOT S8:S9
S13	7790	ATOMIC() MASS() (UNIT OR UNITS) OR CALORY OR CALORIES OR FOO-T() POUND??? OR NEWTON() (METER? ? OR METRE? ?) OR DALTON? ?
S14	17357	WATT OR WATTS OR MILLIWATT? ? OR KILOWATT? ? OR KW OR KWH - OR W()H
S15	5	((S1 OR S5) (10N) S4) (S) S13:S14
S16	5	S15 NOT S8:S12
S17	49	S7(10N) (S1 OR S5)
S18	47	S17 NOT (S8:S12 OR S15)
S19	47	IDPAT (sorted in duplicate/non-duplicate order)
S20	47	IDPAT (primary/non-duplicate records only)

8/7,K/1 (Item 1 from file: 350)

DIALOG(R)File 350:Derwent WPIX

(c) 2006 The Thomson Corp. All rts. reserv.

016055199

WPI Acc No: 2004-213050/200420

**Treatment of a cutaneous vascular lesion by administering a hyperosmotic agent to a region adjacent to the lesion and exposing the lesion to laser radiation**

Patent Assignee: BARTON J K (BART-I); CHAN E K (CHAN-I); MILNER T E

(MILN-I); VARGAS G (VARG-I); WELCH A J (WELC-I); UNIV TEXAS SYSTEM (TEXA

Inventor: BARTON J K; CHAN E K; MILNER T E; VARGAS G; WELCH A J

Number of Countries: 001 Number of Patents: 002

Patent Family:

Patent No	Kind	Date	Applicat No	Kind	Date	Week
US 20040019120	A1	20040129	US 2002363726	P	20020312	200420 B
			US 2003385195	A	20030310	
US 6942663	B2	20050913	US 2002363726	P	20020312	200560
			US 2003385195	A	20030310	

Priority Applications (No Type Date): US 2002363726 P 20020312; US 2003385195 A 20030310

Patent Details:

Patent No	Kind	Lan	Pg	Main IPC	Filing Notes
US 20040019120	A1	15	A61K-031/45	Provisional application	US 2002363726
US 6942663	B2		A61B-018/14	Provisional application	US 2002363726

Abstract (Basic): US 20040019120 A1

NOVELTY - Treatment (M1) of a **cutaneous** vascular lesion involves administration of a hyperosmotic agent (a1) to a region adjacent to the lesion and exposing the lesion to laser radiation.

ACTIVITY - Vasotropic; Antiulcer; Gastrointestinal-Gen.

MECHANISM OF ACTION - None given.

USE - For treatment of a **cutaneous** vascular lesion in human e.g. stomach ulcer (claimed).

ADVANTAGE - (a1) slows (preferably 15%) blood flow velocity prior to exposure to laser radiation (preferably reduced to zero). The amount of radiation required to destroy a blood vessel of a **cutaneous** vascular lesion is reduced by 15%. (a1) reduces light reflection and refraction among cellular components within the region and adjacent the blood vessel thus, enhancing light transmission through the region. The increased light penetration due to (a1) allows for better localization of light on deep blood vessels that previously would have not been targeted; and decreased in blood flow velocity allows significantly lower radiant light exposures to be used for blood vessel photocoagulation. The method delivers sufficient laser energy to a targeted blood vessel to destroy the vessel without damage to the **epidermis** and **dermis** by making it possible to use lower power lasers to cause irreversible photocoagulation. The observed optical, morphological, and physiological effects due to application of the chemical agents to **skin** are reversible with simple hydration of the **tissue**.

pp; 15 DwgNo 0/10

Derwent Class: A96; B04; P31; P34; S02; S05; V07; V08

International Patent Class (Main): A61B-018/14; A61K-031/45

International Patent Class (Additional): A61K-031/40; A61K-047/06;

A61K-047/46; A61N-001/30

Technology Focus:

... the lesion to laser radiation involves **irradiating the lesion with an energy 0.2 - 6 J / cm2 per area**. (M1) additionally involves delivering a hydrating agent (preferably saline) to a region adjacent

Extension Abstract:

... a1) is administered by injection through a hypodermic **needle** or a high velocity jet or by tape stripping, ablation, chemical peel, mechanical debridement, electroporation...

8/7,K/2 (Item 2 from file: 350)

DIALOG(R)File 350:Derwent WPIX

(c) 2006 The Thomson Corp. All rts. reserv.

015302083 \*\*Image available\*\*

WPI Acc No: 2003-363017/200334

**Device useful for modulating immune responses to antigens comprises impermeable biocompatible shell having outer surface with several pores and interior lumen and biocompatible fibrous scaffolding disposed within the lumen**

Patent Assignee: APPLIED VACCINE TECHNOLOGIES CORP (VACC-N); KOYFMAN I S (KOYF-I); ROSENBLATT J (ROSE-I); TENHUISEN K S (TENH-I); CERAMI A (CERA-I); CERAMI C (CERA-I); XIE Q (XIEQ-I)

Inventor: CERAMI A; CERAMI C; KOYFMAN I S; ROSENBLATT J; TENHUISEN K S; XIE Q

Number of Countries: 100 Number of Patents: 004

Patent Family:

Patent No	Kind	Date	Applicat No	Kind	Date	Week
WO 200320161	A2	20030313	WO 2002US14759	A	20020509	200334 B
US 20030118630	A1	20030626	US 200117457	A	20011207	200343
AU 2002353762	A1	20030318	AU 2002353762	A	20020509	200452
AU 2002353762	A8	20051013	AU 2002353762	A	20020509	200619

Priority Applications (No Type Date): US 200117457 A 20011207; US 44123456 A 20010511

Patent Details:

Patent No	Kind	Lan	Pg	Main IPC	Filing Notes
-----------	------	-----	----	----------	--------------

WO 200320161	A2	E	17	A61D-000/00	
--------------	----	---	----	-------------	--

Designated States (National): AE AG AL AM AT AU AZ BA BB BG BR BY BZ CA CH CN CO CR CU CZ DE DK DM DZ EC EE ES FI GB GD GE GH GM HR HU ID IL IN IS JP KE KG KP KR KZ LC LK LR LS LT LU LV MA MD MG MK MN MW MX MZ NO NZ OM PH PL PT RO RU SD SE SG SI SK SL TJ TM TN TR TT TZ UA UG US UZ VN YU ZA ZM ZW

Designated States (Regional): AT BE CH CY DE DK EA ES FI FR GB GH GM GR IE IT KE LS LU MC MW MZ NL OA PT SD SE SL SZ TR TZ UG ZM ZW

US 20030118630	A1			A61K-009/70	
----------------	----	--	--	-------------	--

AU 2002353762	A1			A61D-000/00	Based on patent WO 200320161
---------------	----	--	--	-------------	------------------------------

AU 2002353762	A8			A61K-009/00	Based on patent WO 200320161
---------------	----	--	--	-------------	------------------------------

Abstract (Basic): WO 200320161 A2

NOVELTY - An immune modulation device (2) comprises an impermeable biocompatible shell (4) having an outer surface (8) with several pores (6) to allow the ingress and egress of immune cells and an interior lumen (10) and a biocompatible fibrous scaffolding (12) disposed within the interior lumen.

DETAILED DESCRIPTION - INDEPENDENT CLAIMS are also included for:

(1) obtaining immune cells from an animal involving harvesting immune cells from (2) that was implanted within animal to allow immune cells to migrate into (2) (the device has antigen or chemotatic agent to provoke an immune response); and

(2) manufacturing (2) comprising (4) having (8) and (10) involving placing (12) within (10), and forming (6) within (4) of suitable size to allow the ingress and egress of immune cells.

ACTIVITY - Immunosuppressive; Antidiabetic; Antiallergic; Antirheumatic; Antiarthritic; Neuroprotective; Ophthalmological; Antiinflammatory; Dermatological; Antithyroid.

No biological data given.

MECHANISM OF ACTION - Immune response modulator.

USE - For modulating the immune response in animals (claimed); in the treatment of allergies, autoimmune disease, type I diabetes, rheumatoid arthritis, multiple sclerosis, uveitis, systemic lupus erythematosus, myasthenia gravis and Grave's disease.

ADVANTAGE - At least a part of antigen is bioavailable at the time of or after the immune modulation device is implanted into the animal and hence results in inducing or enhancing the immune response of the antigen and suppressing or down regulating existing or potential immune response of the antigen. The device comprises polymer having glass transition temperature below physiologic temperature, hence the device minimizes irritation when implanted in soft tissues. The shell allows cell ingress, but hinders diffusion of soluble molecules out of device, which helps to concentrate cytokines (e.g. lymphokine and chemokine) secreted by cells which have entered the device in response to loaded antigens and other cells which are present in the device. The device has local concentration of cells and cytokines, thus enhances immune

response relative to implantation of antigens with standard adjuvants.

DESCRIPTION OF DRAWING(S) - The figure shows immune modulation device.

Immune modulation device (2)  
Shell (10) interior lumen (4)  
Pores (6)  
Fibrous scaffolding (12)  
Outer surface. (8)  
pp; 17 DwgNo 1/5

Derwent Class: A96; B04; C03; D16; D22; P32; P73

International Patent Class (Main): A61D-000/00; A61K-009/00; A61K-009/70

International Patent Class (Additional): A61F-013/00; A61K-035/14;

A61K-038/00; A61K-039/00; B32B-027/12; C07K-014/00; C12N-005/06;

C12Q-001/06; G01N-033/53; G01N-033/543

Technology Focus:

... Salmonella enteritidis, Salmonella heidleberg, Salmonella paratyphi, Salmonella typhimurium, Shigella dysenteriae, Staphylococcus aureus, Streptococcus ecoli, Staphylococcus epidermidis , Streptococcus pyrogenes, Streptococcus mutans, Streptococcus (Group B), Streptococcus bovis, Streptococcus dysgalactiae, Streptococcus equisimili, Streptococcus uberis...

Extension Abstract:

... ID of 2 x 1.5, 0.9 +/- 0.7 (mm/mm); fluence of 10 J / cm<sup>2</sup> ; pulse rate of 50 Hz; and etch rate of 0.63 microm/pulse. The textured fiber filling was placed inside the membrane. The texture fiber was attached to a small needle or thin filament of wire and pulled through membrane. The porosity was calculated from the...

8/7,K/4 (Item 4 from file: 350)

DIALOG(R)File 350:Derwent WPIX

(c) 2006 The Thomson Corp. All rts. reserv.

014952984

WPI Acc No: 2003-013497/200301

**Laser surgery method for treating skin cancer, involves administering pulsating Nd-laser radiation with intensity determined by physical parameters of tumor**

Patent Assignee: ONCOLOGY RES INST (ONCO-R)

Inventor: AFANASEV B P; KOZLOV A P; MOSKALIK K G; VESNIN A G

Number of Countries: 001 Number of Patents: 001

Patent Family:

Patent No	Kind	Date	Applicat No	Kind	Date	Week
RU 2189261	C2	20020920	RU 2000113660	A	20000530	200301 B

Priority Applications (No Type Date): RU 2000113660 A 20000530

Patent Details:

Patent No	Kind	Lan	Pg	Main IPC	Filing Notes
-----------	------	-----	----	----------	--------------

RU 2189261	C2		5	A61N-005/067	
------------	----	--	---	--------------	--

Abstract (Basic): RU 2189261 C2

NOVELTY - Method involves carrying out ultrasonic tumor examination, making thin- needle tumor biopsy to determine its maximum thickness. Then, pulsating Nd-laser radiation is administered with 1-5 impulses of 4.5 ms duration each. Radiation intensity is determined from a formula:  $I = (a + bx) / T$ , where I is the radiation intensity of an impulse in kw/cm<sup>2</sup>, x is the maximum tumor thickness in mm, T is the impulse duration in ms, a and b are the empiric coefficients, a=46 J / cm<sup>2</sup> and b=77 J / cm<sup>2</sup>.

DETAILED DESCRIPTION - Irradiation covers also healthy **skin** area around the tumor 0.2-1.0 cm from maximum protruding boundary portion of subclinical tumor propagation.

USE - For treating **skin** cancer.

ADVANTAGE - Enhanced effectiveness of treatment; minimum risk of recidivation and metastases formation.

pp; 5 DwgNo 0/0

Derwent Class: P34; S05

International Patent Class (Main): A61N-005/067

8/7,K/6 (Item 6 from file: 350)

DIALOG(R)File 350:Derwent WPIX

(c) 2006 The Thomson Corp. All rts. reserv.

014551378

WPI Acc No: 2002-372081/200240

Collecting test materials from subjects without puncturing **skin** , by applying energy to **skin** , preferably using laser, to enhance permeation then collecting sample from energized site

Patent Assignee: TRANSMEDICA INT INC (TRAN-N)

Inventor: FLOCK S T; MARCHITTO K S

Number of Countries: 092 Number of Patents: 002

Patent Family:

Patent No	Kind	Date	Applicat No	Kind	Date	Week
WO 200226148	A1	20020404	WO 2000US26218	A	20000925	200240 B
AU 200076114	A	20020408	AU 200076114	A	20000925	200252
			WO 2000US26218	A	20000925	

Priority Applications (No Type Date): WO 2000US26218 A 20000925

Patent Details:

Patent No	Kind	Lan	Pg	Main IPC	Filing Notes
-----------	------	-----	----	----------	--------------

WO 200226148	A1	E	80	A61B-018/20	
--------------	----	---	----	-------------	--

Designated States (National): AE AG AL AM AT AU AZ BA BB BG BR BY CA CH CN CR CU CZ DE DK DM DZ EE ES FI GB GD GE GH GM HR HU ID IL IN IS JP KE KG KP KR KZ LC LK LR LS LT LU LV MA MD MG MK MN MW MX MZ NO NZ PL PT RO RU SD SE SG SI SK SL TJ TM TR TT TZ UA UG UZ VN YU ZA ZW

Designated States (Regional): AT BE CH CY DE DK EA ES FI FR GB GH GM GR IE IT KE LS LU MC MW MZ NL OA PT SD SE SL SZ TZ UG ZW

AU 200076114 A A61B-018/20 Based on patent WO 200226148

Abstract (Basic): WO 200226148 A1

NOVELTY - Collecting at least one material (A) from within a subject comprises:

(i) applying energy to a portion of the **skin** in an amount to cause alteration (at least as deep as the outermost surface of the **stratum corneum** ) at the energized site; and

(ii) collecting (A) from the energized site

USE - (A) is specifically selected from interstitial fluid, blood, blood components, cells and/or cellular materials, and includes selected from glucose, electrolytes, bacteria, viruses, nucleic acids, lipids, proteins, polysaccharides, gases and/or foreign materials; in particular (A) is collected from direct contact with interstitial fluid (all claimed). The obtained sample is then tested, typically to determine the glucose content.

ADVANTAGE - The irradiation-enhanced permeation and collection method requires no puncturing of the **skin** , causes no bleeding and avoids problems associated with contamination by and disposal of 'sharp' such as **needles** or lancets. The process can be carried out

using small, light-weight, portable, battery-operated lasers, e.g. in clinics or homes.

pp; 80 DwgNo 0/46

Derwent Class: B04; B07; L03; P31; P34; S03; S05

International Patent Class (Main): A61B-018/20

International Patent Class (Additional): A61N-001/30

Technology Focus:

... the laser energy has wavelength 1.5-10  $\mu\text{m}$  and energy flux 0.1-100000 J /  $\text{cm}^2$  and the **skin** target area is 0.001-10 mm in diameter; in particular Er:YAG laser energy...

...Preferred Materials - The process also includes treating the **skin** with at least one permeation enhancer selected from dimethyl sulfoxide, alcohol, azone, pentaerythritol dioleates, lauramide...

Extension Abstract:

... Results showed that the barrier function of the **stratum corneum** was reduced, the water loss being 131, 892 and 1743 g/m<sup>2</sup>/h at pulse...

8/7,K/7 (Item 7 from file: 350)

DIALOG(R) File 350:Derwent WPIX

(c) 2006 The Thomson Corp. All rts. reserv.

012598772

WPI Acc No: 1999-404878/199934

**Permanent hair removal using compound containing alkaline ions**

Patent Assignee: QUON D W (QUON-I); QUON H W (QUON-I); QUON W A (QUON-I); QUON D K (QUON-I)

Inventor: QUON D W; QUON H W; QUON W A; QUON D K

Number of Countries: 035 Number of Patents: 004

Patent Family:

Patent No	Kind	Date	Applicat No	Kind	Date	Week
WO 9929245	A1	19990617	WO 98US26302	A	19981210	199934 B
AU 9919092	A	19990628	AU 9919092	A	19981210	199946
US 6090101	A	20000718	US 97987956	A	19971210	200037
CA 2314138	C	20060131	CA 2314138	A	19981210	200613
			WO 98US26302	A	19981210	

Priority Applications (No Type Date): US 97987956 A 19971210

Patent Details:

Patent No Kind Lan Pg Main IPC Filing Notes

WO 9929245 A1 E 23 A61B-017/41

Designated States (National): AU BR CA CN DE DK ES GB IL IS JP KP KR MX NO NZ RO RU SE SG TR

Designated States (Regional): AT BE CH CY DE DK ES FI FR GB GR IE IT LU MC NL PT SE

AU 9919092 A A61B-017/41 Based on patent WO 9929245

US 6090101 A A61B-017/36

CA 2314138 C E A61B-017/41 Based on patent WO 9929245

Abstract (Basic): WO 9929245 A1

NOVELTY - Permanent hair removal from living human **skin** comprises:

(1) introducing a compound containing alkaline ions into the **skin** surface in the region of undesired hair and

(2) heating the alkaline ions with radiant energy providing at least 1.0 joule /  $\text{cm}^2$ .

DETAILED DESCRIPTION - Permanent hair removal from living human **skin** having unwanted growing hair comprises destroying undesired hair

cells by:

(1) introducing a compound containing alkaline ions into the **skin** surface in the region of undesired hair and

(2) heating the alkaline ions with radiant energy providing at least 1.0 **joule / cm . 2** .

The alkaline ions attack and destroy hair cells in various stages of growth.

An INDEPENDENT CLAIM is also included for an apparatus for permanently removing hair which comprises:

(A) an ion introducing means for transporting alkaline ions from the **skin** surface to undesired hair cells beneath the **skin** surface and

(B) a heating means for heating and activating alkaline ions below the **skin** surface to interact and destroy unwanted hair cells.

ACTIVITY - None given.

MECHANISM OF ACTION - None given.

USE - Used for permanently removing hair and preventing follicular regeneration and hair regrowth.

ADVANTAGE - The method eliminates hair by hair **needle** treatment, reduces the risks of laser treatment alone and is able to treat groups of hairs, which increases the treatment speed. The method damages hair cells which are in the resting stage in the **epidermis** .

pp; 23 DwgNo 0/6

Derwent Class: B06; D21; P31; P34; S05

International Patent Class (Main): A61B-017/36; A61B-017/41

International Patent Class (Additional): A61B-018/18; A61B-018/20;

A61K-008/19; A61M-037/00; A61N-001/00; A61N-001/30; A61N-001/44;

A61Q-009/00

Technology Focus:

... Preferred method: The method also includes removing surface hair and cleaning and degreasing the **skin** surface. Heating includes irradiating the area of interest with a laser operating in the red...  
...1200 (preferably 600-1200) nm with a non-coherent radiant energy source providing 5-100 **joules / cm . 2** in pulses with a duration of 0.3-150 milliseconds, with a source of microwave...  
...applied in exposure intervals of 0.3-150 milliseconds at a power of 5-100 **joules / cm2** . The compound contains potassium carbonate or sodium bicarbonate...  
...voltages of 12-100 volts. The current through the body moves alkaline ions below the **skin** into the **tissues** of the body adjacent to unwanted hair cells. The introducing means includes an ultrasound generator for applying ultrasonic waves to the **skin** surface near unwanted hair cells which cause the alkaline ions to be transported below the surface of the **skin** or a mechanical vibrating massager for facilitating the transport of alkaline ions beneath the surface of the **skin** . The heating means may include a pulsed or continuous wave laser operating at 600-1200...

10/7,K/1 (Item 1 from file: 350)

DIALOG(R)File 350:Derwent WPIX

(c) 2006 The Thomson Corp. All rts. reserv.

012889766 \*\*Image available\*\*

WPI Acc No: 2000-061600/200005

**Trans myocardial revascularization method**

Patent Assignee: GALIL MEDICAL LTD (GALI-N)

Inventor: AMMAR R; BLIWEIS M; OFER G; STURLESI G E  
Number of Countries: 001 Number of Patents: 001  
Patent Family:

Patent No	Kind	Date	Applicat No	Kind	Date	Week
US 5993444	A	19991130	US 97982860	A	19971202	200005 B
			US 98126380	A	19980730	

Priority Applications (No Type Date): US 97982860 A 19971202; US 98126380 A 19980730

Patent Details:

Patent No	Kind	Lan Pg	Main IPC	Filing Notes
US 5993444	A	7	A61B-017/36	Div ex application US 97982860 Div ex patent US 5885276

Abstract (Basic): US 5993444 A

NOVELTY - The method involves cryoblating selected portion of myocardial **tissue** by using cryosurgery device having a **needle** shaped operating tip (4). The diameter of the operating tip is between 0.8 mm to 1.6 mm. High pressure gas is supplied to **Joule** Thomson heat exchangers via a passageway (10).

USE - For trans myocardial cryo revascularization.

ADVANTAGE - Operating tip may be of any predetermined diameter and shape to minimize damage to surrounding areas. Formation of durable trans myocardial channel without considerable trauma to **tissue** is possible due to aesthetic quality of device. Minimizes bleeding, risk of thrombosis and aneurysms, protein denaturation, edema formation and inflammatory response. Enables precise prediction of dimensions of trans myocardial channels, enabling accurate determination of amount of infecting particles to produce desired therapeutic effect. Blood from ventricular cavity immediately freezes at endocardial surface, thereby enabling prolonged communication between vector particles and **tissue**.

DESCRIPTION OF DRAWING(S) - The figure shows schematic side view of cryosurgery device.

Operating tip (4)

Passageway (10)

pp; 7 DwgNo 1/2

Derwent Class: P31

International Patent Class (Main): A61B-017/36

12/7,K/4 (Item 4 from file: 350)

DIALOG(R) File 350:Derwent WPIX

(c) 2006 The Thomson Corp. All rts. reserv.

011322872 \*\*Image available\*\*

WPI Acc No: 1997-300776/199728

**Hair removal method by damaging hair follicle lining - applying laser energy into elongated invasive element inserted into follicle, tip having frosted tip with roughened fibre to scatter laser energy in radial direction w.r.t. tip axis**

Patent Assignee: LASER IND LTD (LASE-N)

Inventor: BRAUDE O; KLEIN A; ROZENBERG Z; SLATKINE M; WALDMAN A

Number of Countries: 007 Number of Patents: 005

Patent Family:

Patent No	Kind	Date	Applicat No	Kind	Date	Week
GB 2308307	A	19970625	GB 9626150	A	19961217	199728 B
EP 874666	A1	19981104	EP 96940711	A	19961218	199848
			WO 96IL184	A	19961218	
IL 119854	A	19991130	IL 119854	A	19961218	200006



JP 2001520534 W 20011030 WO 96IL184 A 19961218 200202  
JP 97513798 A 19961218  
ES 2230570 T3 20050501 EP 96940711 A 19961218 200532  
Priority Applications (No Type Date): US 958802 P 19951218; IL 118229 A  
19960512; IL 119051 A 19960811

Cited Patents: US 4617926; US 5282797; US 5486172; WO 9113652

Patent Details:

Patent No	Kind	Lan	Pg	Main IPC	Filing Notes
GB 2308307	A		20	A61B-017/36	
EP 874666	A1 E			A61N-005/06	Based on patent WO 9722384
Designated States (Regional): DE ES FR GB IT					
IL 119854	A			A45D-026/00	
JP 2001520534	W		35	A61N-005/06	Based on patent WO 9722384
ES 2230570	T3			A61N-005/06	Based on patent EP 874666

Abstract (Basic): GB 2308307 A

The method involves inserting an elongated invasive element i.e. a waveguide (4) probe or **needle** into a hair follicle (2), and applying laser energy into the invasive element. The invasive element including a frosted tip (14) having a roughened fibre which scatters the laser energy in a radial direction (18) relative to the probe axis (16) along the entire length of the frosted tip, the laser energy being of sufficient energy and pulse duration to damage the entire lining of the hair follicle.

The laser energy is pulsed so that each pulse has an energy level of 20-400 milli- **joules** and a pulse duration of at most 30 milliseconds. Black energy absorbing particles may be embedded into the hair follicle via a lotion to absorb the diffused laser energy, to protect the outlying **skin** from an extent of penetration of the laser energy.

ADVANTAGE - Irradiates and destroys entire lining of follicle including papilla blood vessels (12), hair shaft (10), hair bulb (6) and hair bulge (8), without destroying non-follicle **tissue** below papilla. Uses higher percentage of applied laser energy to destroy lining.

Dwg.1/4

Derwent Class: A96; P24; P31; P34; S05; V08

International Patent Class (Main): A45D-026/00; A61B-017/36

International Patent Class (Additional): A61N-005/06; H01S-003/00

12/7,K/5 (Item 5 from file: 350)

DIALOG(R)File 350:Derwent WPIX

(c) 2006 The Thomson Corp. All rts. reserv.

009287176 \*\*Image available\*\*

WPI Acc No: 1992-414587/199250

Blood sampling device and method using laser - has tiny holes punched in human skin for taking blood samples using laser producing laser pulses in narrow beam of given cross section, energy and time period

Patent Assignee: TANKOVICH N I (TANK-I)

Inventor: TANKOVICH N I

Number of Countries: 001 Number of Patents: 002

Patent Family:

Patent No	Kind	Date	Applicat No	Kind	Date	Week
US 5165418	A	19921124	US 92844786	A	19920302	199250 B
US 5165418	B1	19991214	US 92844786	A	19920302	200005

Priority Applications (No Type Date): US 92844786 A 19920302

Patent Details:

Patent No	Kind	Lan	Pg	Main IPC	Filing Notes
US 5165418	A		5	A61B-005/00	
US 5165418	B1			A61B-005/00	

Abstract (Basic): US 5165418 A

**The laser punches tiny holes in human skin** for the purpose of taking blood samples. A laser is provided for producing laser pulses in a narrow beam having a cross section of about 0.2 to 1.5 millimeter in diameter to deposit 0.5 joules to 4 joules of laser energy on the skin in a time period of between 5 us and 600 us. A 1.5 joule, 150 us, 0.5 millimeter diameter pulse is directed at a patient's finger tip.

The pulse vaporises a hole about 1 mm in diameter and 1.5 mm deep to produce about one to three drops of blood for a blood sample. A large vein in the arm is punctured by a four pulse beam of 1.5 joule pulses. A hole of about 1 mm diameter and about 4 mm deep is produced which permits blood samples of several millilitres to be taken.

ADVANTAGE - Less frightening and painful. Reduced risk of infection e.g. without risk of contracting AIDS from contaminated needle.

p

Dwg.3/5

Derwent Class: P31; S03; S05

International Patent Class (Main): A61B-005/00

16/7,K/2 (Item 2 from file: 350)

DIALOG(R)File 350:Derwent WPIX

(c) 2006 The Thomson Corp. All rts. reserv.

014482455 \*\*Image available\*\*

WPI Acc No: 2002-303158/200234

**Transluminal intramyocardial channel forming system, comprises intramyocardial channels forming mechanism having needle, radio-frequency energy generator, thermowire, and electrode; and catheter**

Patent Assignee: MEDTRONIC INC (MEDT )

Inventor: DARIUS H; DIETZ U; DUYSENS V; EICK O

Number of Countries: 001 Number of Patents: 001

Patent Family:

Patent No	Kind	Date	Applicat No	Kind	Date	Week
US 20020019629	A1	20020214	US 98113382	A	19980710	200234 B
			US 99453096	A	19991202	
			US 2000210733	P	20000612	
			US 2001871657	A	20010604	

Priority Applications (No Type Date): US 2000210733 P 20000612; US 98113382 A 19980710; US 99453096 A 19991202; US 2001871657 A 20010604

Patent Details:

Patent No	Kind	Lan	Pg	Main IPC	Filing Notes
US 20020019629	A1		16	A61B-018/14	Div ex application US 98113382 CIP of application US 99453096 Provisional application US 2000210733

Abstract (Basic): US 20020019629 A1

**NOVELTY** - A transluminal intramyocardial channel forming system comprises intramyocardial channels forming mechanism having needle, radio-frequency energy generator, thermowire, and electrode; and catheter for delivering the needle to a cardiac tissue.

**DETAILED DESCRIPTION** - A transluminal intramyocardial channel

forming system comprises intramyocardial channels forming mechanism comprising:

- (i) **needle** (20) having sharpened distal tip, a piercing length of 3-9 mm, and a maximum piercing diameter of 0.5-1.5 mm,
- (ii) radio-frequency (RF) energy generator comprising generating and controlling mechanism,
- (iii) thermowire for sensing and relaying a feedback control signal indicative of a cardiac **tissue** temperature, and
- (iv) an electrode adjacent to the **needle** and operably connected to the RF energy generator.

The RF energy generator is operably connected to the **needle**. The thermowire is operably connected to the RF energy generator to permit the feedback control signal to be relayed. The RF energy generator, the RF power controller, and the thermowire are interconnected and configured to form an integrated feedback control system. The integrated feedback control system maintains the cardiac **tissue** temperature at 50-100 degrees C for 1-50 seconds, when the distal tip of the **needle** is disposed in cardiac **tissue** to form an intramural channel. It is also configured to form necrotic zones of minimum thickness in the channel. A catheter for delivering the **needle** to the cardiac **tissue** comprises at least one of lumen and an over-the-wire mechanism for accepting at least portions of the intramyocardial channel forming mechanism within the catheter. It further comprises a third distal end, and a fourth proximal end.

An INDEPENDENT CLAIM is also included for a transluminal method comprising inserting third distal end into a blood vessel of a patient which provides venous access to the patient's heart, guiding the third distal end to the cardiac **tissue**, piercing the cardiac **tissue**, and delivering RF energy to the **needle** to form the transmural channel.

USE - For creating intramyocardial channels in cardiac **tissue** of patient's heart.

ADVANTAGE - The invention increases the number of channels formed in cardiac **tissue** remaining open and unoccluded, eliminates the occurrence of barotrauma, and stabilizes channels formed in cardiac **tissue** so that perfusion of cardiac **tissue** can continue. It permits a high degree of temperature control when forming channels in cardiac **tissue**, and avoids burning or charring of cardiac **tissue** during channel formation. It also avoids the formation of necrotic zones of excessive extent adjacent to the channels, and minimizes the occurrence of epicardial holes.

DESCRIPTION OF DRAWING(S) - The figure shows a distal tip of a catheter.

**Needle** (20)

pp; 16 DwgNo 2/9

Derwent Class: B07; P31; S05

International Patent Class (Main): A61B-018/14

Technology Focus:

... French. The RF energy generating and controlling mechanism delivers 0.5-50, preferably 3-20 **Watts** to the **needle**. An impedance measured between the **needle** and the electrode is 10-500...  
...75 degreesC for 2-45, preferably 5-25 seconds, when the distal tip of the **needle** is disposed in cardiac **tissue**.

(c) 2006 The Thomson Corp. All rts. reserv.  
013954108 \*\*Image available\*\*  
WPI Acc No: 2001-438322/200147

**Method for smoothing out wrinkles with high-frequency**

Patent Assignee: PRIME MEDITECH CORP (PRIM-N)  
Inventor: KIM Y S

Number of Countries: 001 Number of Patents: 001

Patent Family:

Patent No	Kind	Date	Applicat No	Kind	Date	Week
KR 2001000523	A	20010105	KR 200058346	A	20001004	200147 B

Priority Applications (No Type Date): KR 200058346 A 20001004

Patent Details:

Patent No	Kind	Lan	Pg	Main IPC	Filing Notes
-----------	------	-----	----	----------	--------------

KR 2001000523	A		1	A61B-018/00	
---------------	---	--	---	-------------	--

Abstract (Basic): KR 2001000523 A

NOVELTY - A method for smoothing out wrinkles is accomplished by using high-frequency elevation current capable of solving problems such as temporary effect or adverse effect, etc. involved with conventional methods.

DETAILED DESCRIPTION - A method for smoothing out wrinkles includes using a device comprising a control box, a hand piece and a **needle**. The control box comprises a **watt** control part, a pulse control part and a time control part. The method is primarily performed by sticking an insulated **needle** into the upper side of **dermis** in wrinkled area and flowing high-frequency elevation current into gelatinous fibers and resilient fibers. As a result, cellular textures are dilated and expanded to result in a rising of the wrinkled area. The high-frequency is preferably ranged from about 1-7MHz in order to induce the dilation of **dermis** for smoothing out wrinkles.

pp; 1 DwgNo 1/10

Derwent Class: P31

International Patent Class (Main): A61B-018/00

20/7,K/13 (Item 13 from file: 350)

DIALOG(R)File 350:Derwent WPIX

(c) 2006 The Thomson Corp. All rts. reserv.  
016501990

WPI Acc No: 2004-660273/200464

**Method for removing wrinkles and juvenalizing skin in non-invasive way**

Patent Assignee: PONOMAREV I V (PONO-I)

Inventor: PONOMAREV I V

Number of Countries: 001 Number of Patents: 001

Patent Family:

Patent No	Kind	Date	Applicat No	Kind	Date	Week
RU 2234960	C1	20040827	RU 2003108291	A	20030326	200464 B

Priority Applications (No Type Date): RU 2003108291 A 20030326

Patent Details:

Patent No	Kind	Lan	Pg	Main IPC	Filing Notes
-----------	------	-----	----	----------	--------------

RU 2234960	C1			A61N-005/067	
------------	----	--	--	--------------	--

Abstract (Basic): RU 2234960 C1

NOVELTY - Method involves administering pulsating laser radiation treatment at wavelength being equal to 511 or 578 nm in acting upon collagenous layer 1-1.2 mm under **epidermis**. Laser pulses duration is 10-50 ns, repetition frequency is 10-30 kHz. Laser impulse train exposure time is equal to 0.1-0.3 s per one 0.2-2.0 mm spot on **skin**

covered with wrinkles. Power density does not exceed 10 J / cm<sup>2</sup> . The number of procedures and space separating them is set depending on depth and number of wrinkles and skin area dimensions.

USE - Medicine.

ADVANTAGE - Enhanced effectiveness in removing wrinkles, folds and cicatrices without risk of traumatic complications.3 cl

pp; 0 DwgNo 0/0

Derwent Class: P34; S05

International Patent Class (Main): A61N-005/067

20/7,K/23 (Item 23 from file: 350)

DIALOG(R)File 350:Derwent WPIX

(c) 2006 The Thomson Corp. All rts. reserv.

014980201

WPI Acc No: 2003-040716/200303

**Prevention of long-term ultraviolet-B-induced wrinkles in human, involves inhibiting angiogenesis in the subject's skin**

Patent Assignee: GEN HOSPITAL CORP (GEHO ); KIICHIRO Y (KIIC-I); YANO K (YANO-I); DETMAR M J (DETM-I)

Inventor: DETMAR M J; MICHAEL J D; YANO K

Number of Countries: 097 Number of Patents: 008

Patent Family:

Patent No	Kind	Date	Applicat No	Kind	Date	Week
WO 200283088	A1	20021024	WO 2002US11403	A	20020411	200303 B
US 20030008821	A1	20030109	US 2001283874	P	20010413	200311
			US 2002122263	A	20020411	
EP 1377253	A1	20040107	EP 2002723824	A	20020411	200404
			WO 2002US11403	A	20020411	
US 6712617	B2	20040330	US 2001283874	P	20010413	200423
			US 2002122263	A	20020411	
AU 2002254588	A1	20021028	AU 2002254588	A	20020411	200433
KR 2004021598	A	20040310	KR 2003713393	A	20031011	200444
JP 2004526758	W	20040902	JP 2002580892	A	20020411	200457
			WO 2002US11403	A	20020411	
CN 1512868	A	20040714	CN 2002811284	A	20020411	200467

Priority Applications (No Type Date): US 2001283874 P 20010413; US 2002122263 A 20020411

Patent Details:

Patent No Kind Lan Pg Main IPC Filing Notes

WO 200283088 A1 E 69 A61K-007/00

Designated States (National): AE AG AL AM AT AU AZ BA BB BG BR BY BZ CA CH CN CO CR CU CZ DE DK DM DZ EC EE ES FI GB GD GE GH GM HR HU ID IL IN IS JP KE KG KP KR KZ LC LK LR LS LT LU LV MA MD MG MK MN MW MX MZ NO NZ PL PT RO RU SD SE SG SI SK SL TJ TM TR TT TZ UA UG UZ VN YU ZA ZW

Designated States (Regional): AT BE CH CY DE DK EA ES FI FR GB GH GM GR IE IT KE LS LU MC MW MZ NL OA PT SD SE SL SZ TR TZ UG ZW

US 20030008821 A1 A61K-038/17 Provisional application US 2001283874

EP 1377253 A1 E A61K-007/00 Based on patent WO 200283088

Designated States (Regional): AL AT BE CH CY DE DK ES FI FR GB GR IE IT LI LT LU LV MC MK NL PT RO SE SI TR

US 6712617 B2 A61K-007/00 Provisional application US 2001283874

AU 2002254588 A1 A61K-007/00 Based on patent WO 200283088

KR 2004021598 A A61K-007/48

JP 2004526758 W 111 A61K-045/00 Based on patent WO 200283088

CN 1512868 A A61K-007/00

Abstract (Basic): WO 200283088 A1

NOVELTY - A long-term ultraviolet-B (UVB) induced wrinkles in a subject is prevented by identifying a subject in need of wrinkle prevention; and inhibiting angiogenesis in the **skin** of the subject, thus preventing long-term UVB-induced wrinkles in a subject.

DETAILED DESCRIPTION - INDEPENDENT CLAIMS are also included for the following:

(1) A composition for preventing or treating long term UVB-induced wrinkles comprising an inhibitor of angiogenesis or an agent that induces an inhibitor of angiogenesis, and pharmaceutically acceptable carrier;

(2) A method of providing protection against long-term UVB induced wrinkles to a subject comprising supplying to the subject a composition comprising an inhibitor of angiogenesis or an agent that induces an inhibitor of angiogenesis, and supplying to the subject instructions for using the composition to prevent wrinkles;and

(3) A kit for preventing long-term UVB-induced wrinkles in a subject, comprising a composition containing an inhibitor of angiogenesis or an agent that induces an inhibitor of angiogenesis, and instructions for using the composition to prevent wrinkles.

ACTIVITY - None given.

MECHANISM OF ACTION - None given.

USE - For preventing long-term UVB-induced wrinkles in mammals, e.g., humans.

ADVANTAGE - By controlling the number of transfected or secondary cells introduced into an individual, one can control the amount of the protein delivered to the body. It is possible to remove the transfected cells of there is no longer a need for the product. By use of transfected primary or secondary cells, the production of the therapeutic product can be regulated, such as, through the administration of zinc, steroids or an agent which affects transcription of a protein, product or nucleic acid product or affects the stability of a nucleic acid product.

pp; 69 DwgNo 0/0

Derwent Class: B05; D21

International Patent Class (Main): A61K-007/00; A61K-007/48; A61K-038/17; A61K-045/00

International Patent Class (Additional): A61K-007/42; A61K-007/44; A61K-038/00; A61P-017/16

Extension Abstract:

... After 10 weeks of UVB irradiation (cumulative dose: 5.65 J / cm<sup>2</sup> ), replicas were obtained from the back **skin** of UVB irradiated and of non-irradiated mice in order to evaluate the **skin** surface...

20/7,K/32 (Item 32 from file: 350)

DIALOG(R)File 350:Derwent WPIX

(c) 2006 The Thomson Corp. All rts. reserv.

013728500 \*\*Image available\*\*

WPI Acc No: 2001-212730/200122

**Skin treatment device for treating external disorders includes incoherent light source providing light pulses of width in range 0.5 to 10 microseconds and energy density at skin no greater than 10 Joules per square centimeter**

Patent Assignee: ESC MEDICAL SYSTEMS LTD (ESCM-N)

Inventor: ECKHOUSE S

Number of Countries: 017 Number of Patents: 005

Patent Family:

Patent No	Kind	Date	Applicat No	Kind	Date	Week	
EP 1078604	A2	20010228	EP 93302662	A	19930405	200122	B
			EP 2000124370	A	19930405		
EP 1078604	B1	20041020	EP 93302662	A	19930405	200469	
			EP 2000124370	A	19930405		
DE 69333677	E	20041125	DE 93633677	A	19930405	200477	
			EP 2000124370	A	19930405		
ES 2233269	T3	20050616	EP 2000124370	A	19930405	200545	
DE 69333677	T2	20060309	DE 93633677	A	19930405	200622	
			EP 2000124370	A	19930405		

Priority Applications (No Type Date): US 92964210 A 19921020; IL 101547 A 19920409

Patent Details:

Patent No	Kind	Lan Pg	Main IPC	Filing Notes
EP 1078604	A2	E 17	A61B-018/20	Div ex application EP 93302662 Div ex patent EP 565331
Designated States (Regional): AT BE CH DE DK ES FR GB GR IE IT LI LU MC NL PT SE				
EP 1078604	B1	E	A61B-018/18	Div ex application EP 93302662 Div ex patent EP 565331
Designated States (Regional): AT BE CH DE DK ES FR GB GR IE IT LI LU MC NL PT SE				
DE 69333677	E		A61B-018/18	Based on patent EP 1078604
ES 2233269	T3		A61B-018/18	Based on patent EP 1078604
DE 69333677	T2		A61B-018/18	Based on patent EP 1078604

Abstract (Basic): EP 1078604 A2

NOVELTY - The device includes an incoherent light source (14), e.g. a flash lamp, connected to a variable-pulse-width pulse-forming circuit and providing light pulses of width in the range 0.5 to 10 mus, and giving an **energy density on the skin** of up to about 10 J / cm<sup>2</sup>. The source may be mounted in a housing (12) equipped with a reflector (16) close to the source and an opening with an iris (20).

USE - For treating external disorders of the **skin** such as pigmented lesions, tattoos, or birth and age marks.

ADVANTAGE - The device provides a larger exposure area than devices using optical-fiber cables. The light source used has a wide range of wavelengths, which can be selected according to the required **skin** treatment. The pulse-width can be varied over a wide range so that control of thermal depth penetration can be achieved. The light source is much simpler and easier to manufacture than a laser, is significantly less expensive for the same output power energy, and has the potential of being more efficient and reliable.

DESCRIPTION OF DRAWING(S) - The drawing is a cross-sectional view of the **skin** treatment device.

Housing (12)  
 Incoherent light source (14)  
 Reflector (16)  
 Iris (20)  
 Treatment area (21)  
 pp; 17 DwgNo 1/12

Derwent Class: P31; P34; S05; V07

International Patent Class (Main): A61B-018/18; A61B-018/20

International Patent Class (Additional): A61N-005/06

20/7,K/35 (Item 35 from file: 350)  
DIALOG(R)File 350:Derwent WPIX  
(c) 2006 The Thomson Corp. All rts. reserv.  
012954860 \*\*Image available\*\*  
WPI Acc No: 2000-126710/200011

**Skin protection device against the sun useful in detecting and/or treating skin disorders e.g. cancer and its preliminary stages**  
Patent Assignee: MEDEIKONOS AB (MEDE-N)  
Inventor: GUDMUNDSON F; GUDMUNDSSON F  
Number of Countries: 087 Number of Patents: 011  
Patent Family:

Patent No	Kind	Date	Applicat No	Kind	Date	Week	
WO 200000248	A1	20000106	WO 99SE1154	A	19990624	200011	B
SE 512224	C2	20000214	SE 982278	A	19980626	200015	
SE 9802278	A	19991227	SE 982278	A	19980626	200015	
AU 9949457	A	20000117	AU 9949457	A	19990624	200026	
EP 1089786	A1	20010411	EP 99933394	A	19990624	200121	
			WO 99SE1154	A	19990624		
BR 9911475	A	20010320	BR 9911475	A	19990624	200123	
			WO 99SE1154	A	19990624		
NO 200006292	A	20010226	WO 99SE1154	A	19990624	200123	
			NO 20006292	A	20001211		
CN 1307492	A	20010808	CN 99807906	A	19990624	200173	
JP 2002519123	W	20020702	WO 99SE1154	A	19990624	200246	
			JP 2000556832	A	19990624		
US 6471988	B1	20021029	WO 99SE1154	A	19990624	200274	
			US 2001720083	A	20010226		
AU 757565	B	20030227	AU 9949457	A	19990624	200321	

Priority Applications (No Type Date): SE 982278 A 19980626

Patent Details:

Patent No	Kind	Lan	Pg	Main IPC	Filing Notes
WO 200000248	A1	E	15	A61M-035/00	
Designated States (National): AE AL AM AT AU AZ BA BB BG BR BY CA CH CN CU CZ DE DK EE ES FI GB GD GE GH GM HR HU ID IL IN IS JP KE KG KP KR KZ LC LK LR LS LT LU LV MD MG MK MN MW MX NO NZ PL PT RO RU SD SE SG SI SK SL TJ TM TR TT UA UG US UZ VN YU ZA ZW					
Designated States (Regional): AT BE CH CY DE DK EA ES FI FR GB GH GM GR IE IT KE LS LU MC MW NL OA PT SD SE SL SZ UG ZW					
AU 9949457	A			A61M-035/00	Based on patent WO 200000248
EP 1089786	A1	E		A61M-035/00	Based on patent WO 200000248
Designated States (Regional): AT BE CH DE DK ES FI FR GB IE IT LI NL PT					
BR 9911475	A			A61M-035/00	Based on patent WO 200000248
NO 200006292	A			A61M-000/00	
CN 1307492	A			A61M-035/00	
JP 2002519123	W		14	A61M-037/00	Based on patent WO 200000248
US 6471988	B1			A61K-009/70	Based on patent WO 200000248
AU 757565	B			A61M-035/00	Previous Publ. patent AU 9949457
					Based on patent WO 200000248

Abstract (Basic): WO 200000248 A1

NOVELTY - A **skin** area is protected against light when detecting and/or treating **skin** disorders such as cancer and its preliminary stages by an opaque foil (1) forming a cavity (4) relative to the **skin** and having edges (3) engaging the **skin**.

DETAILED DESCRIPTION - The **skin** protection device comprises an opaque foil forming a cavity relative to the **skin** and having edges engaging the **skin**. The width of the edges of the **skin** is determined by



the formula (I):

(I)  $m$  greater than  $\Delta \ln(t \cdot I_0 / D_{\text{diffused}})$ ;

$m$ =width of the edge;

$\Delta$ =penetration depth of the light in the **skin**;

$\ln$ =natural logarithm;

$t$ =the time of the effect of the light;

$I_0$ =luminous intensity at the **skin** surface; and

$D_{\text{diffused}}$ =the diffused energy dose which is allowed to reach the **skin** concerned.

USE - The device is used as an application and protection device for applying compositions and/or compounds, with photoreactive substance, to the **skin**, and protecting the **skin** area against sunlight (claimed) before and after the detection procedure.

ADVANTAGE - The **skin** protection device with a foil made of heat insulating material gives higher temperature in **skin** area treated resulting a better blood supply and contributes to the efficiency of the treatment. The foil ensures that no substance goes outside of the treated area.

DESCRIPTION OF DRAWING(S) - A figure showing the cross-sectional view of the **skin** protection device.

Casing or foil (1)

Edges (3)

Cavity (4).

pp; 15 DwgNo 1/1

Derwent Class: B05; B07; D22; P32; P34

International Patent Class (Main): A61K-009/70; A61M-000/00; A61M-035/00; A61M-037/00

International Patent Class (Additional): A61F-013/02

Extension Abstract:

... 10-20 mm, the luminous energy is diffused under the edges and into the treated **skin** area at 0.2 J / cm<sup>2</sup>. The cavity is covered with protective plastic which is removed before use of the device.

20/7,K/38 (Item 38 from file: 350)

DIALOG(R)File 350:Derwent WPIX

(c) 2006 The Thomson Corp. All rts. reserv.

011683312 \*\*Image available\*\*

WPI Acc No: 1998-100222/199809

**Selected skin area blood vessel at selected depth destroying for health or cosmetic reasons - delivers fluence at skin surface above area of prescribed power per square centimetre with each pulse being of prescribed duration range**

Patent Assignee: STAR MEDICAL TECHNOLOGIES INC (STAR-N)

Inventor: GROVE R E; HOLTZ J Z

Number of Countries: 001 Number of Patents: 001

Patent Family:

Patent No	Kind	Date	Applicat No	Kind	Date	Week
US 5707403	A	19980113	US 9322978	A	19930224	199809 B
			US 96636286	A	19960423	

Priority Applications (No Type Date): US 96636286 A 19960423; US 9322978 A 19930224

Patent Details:

Patent No	Kind	Lan	Pg	Main IPC	Filing Notes
US 5707403	A		7	A61N-005/006	CIP of application US 9322978 CIP of patent US 5527350

Abstract (Basic): US 5707403 A

The method involves positioning a laser so that light from the laser will impinge upon the selected area of a **dermis**. and operating the laser to deliver at least one light pulse to the area having a wavelength between 700 nm and 1100 nm. Each pulse delivers a fluence at a **skin** surface above the area of between 5 **joules per square centimetre** and 100 **joules per square centimetre**. Each pulse has a pulse duration of between 0.2 millisecond and 100 milliseconds.

The light impinges upon an area at the surface of between 0.1 square **centimetre** and 10 square **centimetres**. The laser is operated to deliver a single pulse. The method entails repeating above steps for additional areas of the **dermis** containing blood vessels to be destroyed

USE - To treat and selectively destroy blood vessels located at some depth below surface of **skin**.

ADVANTAGE - Allows selection of size of blood vessel to be destroyed by controlling pulse duration.

Dwg.3b/3

Derwent Class: P34; S05; V08

International Patent Class (Main): A61N-005/006

20/7,K/26 (Item 26 from file: 350)

DIALOG(R)File 350:Derwent WPIX

(c) 2006 The Thomson Corp. All rts. reserv.

014519282

WPI Acc No: 2002-339985/200237

Delivering substances by permeation through skin, comprises energizing the stratum corneum, e.g. using laser energy

Patent Assignee: TRANSMEDICA INT INC (TRAN-N)

Inventor: MARCHITTO K S

Number of Countries: 092 Number of Patents: 002

Patent Family:

Patent No	Kind	Date	Applicat No	Kind	Date	Week
WO 200226149	A1	20020404	WO 2000US26351	A	20000925	200237 B
AU 200076145	A	20020408	AU 200076145	A	20000925	200252
			WO 2000US26351	A	20000925	

Priority Applications (No Type Date): WO 2000US26351 A 20000925

Patent Details:

Patent No	Kind	Lan	Pg	Main IPC	Filing Notes
-----------	------	-----	----	----------	--------------

WO 200226149	A1	E	82	A61B-018/20	
--------------	----	---	----	-------------	--

Designated States (National): AE AG AL AM AT AU AZ BA BB BG BR BY CA CH  
CN CR CU CZ DE DK DM DZ EE ES FI GB GD GE GH GM HR HU ID IL IN IS JP KE  
KG KP KR KZ LC LK LR LS LT LU LV MA MD MG MK MN MW MX MZ NO NZ PL PT RO  
RU SD SE SG SI SK SL TJ TM TR TT TZ UA UG UZ VN YU ZA ZW

Designated States (Regional): AT BE CH CY DE DK EA ES FI FR GB GH GM GR  
IE IT KE LS LU MC MW MZ NL OA PT SD SE SL SZ TZ UG ZW

AU 200076145 A A61B-018/20 Based on patent WO 200226149

Abstract (Basic): WO 200226149 A1

NOVELTY - Delivering a substance through the **skin** comprising administering an amount of energy to a portion of **skin** to cause alteration at the energized site, at least as deep as the outermost surface of the **stratum corneum**, and contacting the energized site with the substance, is new.

USE - For perforating or altering **skin** in a manner that does not result in bleeding, for administration of substances, e.g. pharmaceuticals, through the **skin**, or removal of biomolecules, fluids

or gases.

ADVANTAGE - Drugs can be administered continually on an out patient basis over long periods of time, and the speed and/or efficacy of drug delivery can be enhanced for drugs which are either slow or unable to penetrate **skin**. The method is an alternative to painful injection. The reduced barrier properties of the **stratum corneum** allow the taking of measurements of various fluid constituents, e.g. glucose, or to conduct measurement of gases.

pp; 82 DwgNo 0/46

Derwent Class: B04; D16; P31

International Patent Class (Main): A61B-018/20

Abstract (Basic):

Technology Focus:

... preferably has wavelength 1.5-10 micron, an energy fluence of 0.1-100,00 J / cm<sup>2</sup>, and a target area on the **skin** of 0.001-10 mm in diameter. The laser may be gated, continuous wave or...

12/26,TI/1 (Item 1 from file: 350)

DIALOG(R)File 350:Derwent WPIX

(c) 2006 The Thomson Corp. All rts. reserv.

014869053

WPI Acc No: 2002-689759/200274

**Novel polypeptide, designated zveg3 useful for treating skin wounds, ulcers, burns, skin grafting, female reproductive tract disorders, Parkinson's disease, and Alzheimer's disease**

12/26,TI/2 (Item 2 from file: 350)

DIALOG(R)File 350:Derwent WPIX

(c) 2006 The Thomson Corp. All rts. reserv.

013319224

WPI Acc No: 2000-491163/200043

**Isolated Zntr2 nucleic acids and polypeptides which act as epidermal growth factors, useful for the treatment of e.g. kidney and liver disorders, burns, and ulcers and for regulating smooth muscle cell proliferation**

16/26,TI/1 (Item 1 from file: 350)

DIALOG(R)File 350:Derwent WPIX

(c) 2006 The Thomson Corp. All rts. reserv.

014669099

WPI Acc No: 2002-489803/200252

**Flowable composition useful as controlled implant for treating e.g. endometriosis and cancer, comprises thermoplastic polyester, biocompatible polar aprotic solvent and leuprolide acetate**

16/26,TI/4 (Item 4 from file: 350)

DIALOG(R)File 350:Derwent WPIX

(c) 2006 The Thomson Corp. All rts. reserv.

013250831

WPI Acc No: 2000-422714/200036

**An injectable composition comprising a bio-active glass in a dextran suspension, used to repair, replace, reconstruct or reconstruct soft and /or hard tissue in animals.**

16/26,TI/5 (Item 5 from file: 350)

DIALOG(R)File 350:Derwent WPIX

(c) 2006 The Thomson Corp. All rts. reserv.  
011624624

WPI Acc No: 1998-041752/199804

Fluid composition adapted for e.g. repair and replacement of hard or soft tissue - comprises homogeneous suspension of bio-active and bio-compatible glass particulate in aqueous solution of dextran or dextran derivative

20/TI/1 (Item 1 from file: 350)

DIALOG(R)File 350:(c) 2006 The Thomson Corp. All rts. reserv.

Method for carrying out photodynamic dermabrasion

20/TI/2 (Item 2 from file: 350)

DIALOG(R)File 350:(c) 2006 The Thomson Corp. All rts. reserv.

Inflammation inhibitor for use in skin external preparation or cosmetics for preventing and treating inflammatory disease, or ultraviolet rays induced skin damage e.g. skin aging, contains acylamino acid zinc salt

20/TI/3 (Item 3 from file: 350)

DIALOG(R)File 350:(c) 2006 The Thomson Corp. All rts. reserv.

Treatment of age-related macular degeneration in a primate patient having unwanted choroidal neovasculation involves use of porphyrin dye to localize in neovasculation, and irradiating neovasculation with light having specific irradiance

20/TI/5 (Item 5 from file: 350)

DIALOG(R)File 350:(c) 2006 The Thomson Corp. All rts. reserv.

Photodynamic treatment for fading or removing tattoos, involves intradermally delivering photosensitizer into tattooed tissue, followed by irradiating target tissue with energy at preset wavelength to activate photosensitizer

20/TI/6 (Item 6 from file: 350)

DIALOG(R)File 350:(c) 2006 The Thomson Corp. All rts. reserv.

Device for controlling growth of hair on human skin, limits deliverable energy density of electromagnetic radiation on skin to maximum value selected between specific range, based on selected properties of skin to be treated

20/TI/7 (Item 7 from file: 350)

DIALOG(R)File 350:(c) 2006 The Thomson Corp. All rts. reserv.

Photochemical skin cosmetic composition for improving or preventing non-aesthetic characteristics of skin and preventing skin aging, contains fullerene, its derivatives or salts, as active ingredient

20/TI/8 (Item 8 from file: 350)

DIALOG(R)File 350:(c) 2006 The Thomson Corp. All rts. reserv.

Method for removing hairs involves topical application of composition comprising legume product to area of skin, and exposing the area of skin to light

20/TI/9 (Item 9 from file: 350)

DIALOG(R)File 350:(c) 2006 The Thomson Corp. All rts. reserv.

Photodynamic treatment useful for stimulating hair growth involves administering photosensitizer, and irradiating affected area with energy to activate the photosensitizer

20/TI/10 (Item 10 from file: 350)

DIALOG(R)File 350:(c) 2006 The Thomson Corp. All rts. reserv.

Harmless, natural cosmetic skin treatment compositions, for protecting against UV-A induced lipid oxidation and premature aging, containing mycosporine-like aminoacids

20/TI/11 (Item 11 from file: 350)

DIALOG(R)File 350:(c) 2006 The Thomson Corp. All rts. reserv.

Cosmetic tissue effect creating method for skin treatment, involves performing different levels of cooling to skin surface by generating reverse thermal gradient through skin surface

20/TI/12 (Item 12 from file: 350)

DIALOG(R)File 350:(c) 2006 The Thomson Corp. All rts. reserv.

Modulating healing of wounds and/or damaged tissue, involves irradiating affected tissue with incoherent radiation simultaneously including infrared light and visible light

20/TI/14 (Item 14 from file: 350)

DIALOG(R)File 350:(c) 2006 The Thomson Corp. All rts. reserv.

Hair tip shape modifying apparatus for treatment and prevention of pseudofolliculitis barbae, generates electromagnetic radiation of specific wavelength and pulse width to illuminate skin treatment area with fluence of specific range

20/TI/15 (Item 15 from file: 350)

DIALOG(R)File 350:(c) 2006 The Thomson Corp. All rts. reserv.

Preparation of skin for treatment of cutaneous or subcutaneous compounds, comprises focusing laser beam with energy fluence to ablate or alter skin at least as deep as stratum corneum, but not as deep as capillary layer

20/TI/16 (Item 16 from file: 350)

DIALOG(R)File 350:(c) 2006 The Thomson Corp. All rts. reserv.

Measurement of analyte concentrations in bodily fluids involves focusing laser beam with sufficient energy fluence to ablate the skin at least as deep as the stratum corneum but not as deep as the capillary layer

20/TI/17 (Item 17 from file: 350)

DIALOG(R)File 350:(c) 2006 The Thomson Corp. All rts. reserv.

Topical composition having reversible visible change in color in response to change in light, for e.g. sunscreen product, comprises photochromic material(s) and vehicle acceptable for topical application to skin or hair

20/TI/18 (Item 18 from file: 350)

DIALOG(R)File 350:(c) 2006 The Thomson Corp. All rts. reserv.

Use of 2,2-dialkyl-chroman or -chromene in topical cosmetic or pharmaceutical compositions with antiinflammatory action, useful in the inhibition of inflammatory mediator interleukin release

20/TI/19 (Item 19 from file: 350)

DIALOG(R)File 350:(c) 2006 The Thomson Corp. All rts. reserv.

Skin external preparation for preventing inflammation in skin, comprises extract obtained from leaf portion of Hypericum erectum and Olea europaea

20/TI/20 (Item 20 from file: 350)

DIALOG(R)File 350:(c) 2006 The Thomson Corp. All rts. reserv.

Manipulation of collagen, fibroblast and fibroblast-derived cell levels for treating e.g. wrinkled skin involves the use of low intensity light from at

least one source of narrow-band, multi-chromatic electromagnetic radiation

20/TI/21 (Item 21 from file: 350)

DIALOG(R)File 350:(c) 2006 The Thomson Corp. All rts. reserv.

Preparation of skin for treatment of cutaneous or subcutaneous compounds by firing laser to create ablation or alteration site, and firing second laser with wavelength that is absorbed by applied dye or stimulating compounds

20/TI/22 (Item 22 from file: 350)

DIALOG(R)File 350:(c) 2006 The Thomson Corp. All rts. reserv.

Sunscreen composition for protecting mammalian skin or hair from ultraviolet radiation, contains diester or polyester of naphthalene dicarboxylic acid, and benzophenone derivative

20/TI/24 (Item 24 from file: 350)

DIALOG(R)File 350:(c) 2006 The Thomson Corp. All rts. reserv.

Laser irradiation of skin to increase permeability of skin and allow collection of substances from a body

20/TI/25 (Item 25 from file: 350)

DIALOG(R)File 350:(c) 2006 The Thomson Corp. All rts. reserv.

Introduction of substance, e.g. neuroactive agent, into living body comprises irradiating skin of living body with subablative laser energy, and bringing substance in contact with irradiated area

20/TI/27 (Item 27 from file: 350)

DIALOG(R)File 350:(c) 2006 The Thomson Corp. All rts. reserv.

Treatment of sebaceous gland disorder, e.g. acne or sebaceous gland hyperplasia, comprises topically applying 5-aminolevulinic acid to skin and exposing the skin to energy source

20/TI/28 (Item 28 from file: 350)

DIALOG(R)File 350:(c) 2006 The Thomson Corp. All rts. reserv.

Composition for peeling comprises 5-aminolevulinic acid derivative

20/TI/29 (Item 29 from file: 350)

DIALOG(R)File 350:(c) 2006 The Thomson Corp. All rts. reserv.

Welding of tissue wounds by applying exogenous absorber material to the wound, apposing wound edges, irradiating the wound in pulsed mode of pulses, and cooling immediate area surrounding the wound

20/TI/30 (Item 30 from file: 350)

DIALOG(R)File 350:(c) 2006 The Thomson Corp. All rts. reserv.

Skinned thermoplastic gel for use, e.g. in ergonomic cushioned products or dressing applications, comprises thermoplastic gel formulated with extending fluid and reactive oligomer material

20/TI/31 (Item 31 from file: 350)

DIALOG(R)File 350:(c) 2006 The Thomson Corp. All rts. reserv.

Skin treatment device for treating vascular lesions includes incoherent light source in housing, providing pulsed light having optical parameters that permit beam to penetrate to desired depth to coagulate blood in blood vessel

20/TI/33 (Item 33 from file: 350)

DIALOG(R)File 350:(c) 2006 The Thomson Corp. All rts. reserv.

Use of selina-4(14),7(11)-dien-8-one as a skin whitener

20/TI/34 (Item 34 from file: 350)

DIALOG(R) File 350:(c) 2006 The Thomson Corp. All rts. reserv.

Wrinkle treatment method uses pulsed dye laser to fire short pulses of low power light to stimulate growth in collagen layer of skin

20/TI/36 (Item 36 from file: 350)

DIALOG(R) File 350:(c) 2006 The Thomson Corp. All rts. reserv.

Photo-chemotherapeutic immunosuppressive composition - comprises tetrapyrrole compound e.g. mono-l-aspartyl chlorin e6

20/TI/37 (Item 37 from file: 350)

DIALOG(R) File 350:(c) 2006 The Thomson Corp. All rts. reserv.

Human skin wrinkle treatment method - directing beam of radiation of wavelength 1.3-1.8 microns to dermal region 100 micron to 1.2 mm below wrinkle to cause thermal injury

20/TI/39 (Item 39 from file: 350)

DIALOG(R) File 350:(c) 2006 The Thomson Corp. All rts. reserv.

Reducing rejection of allo-graft(s) contg. antigen presenting cells - by treating transplant tissue with photosensitiser, then irradiation to destroy such cells, partic. for skin and pancreatic inlet grafts

20/TI/40 (Item 40 from file: 350)

DIALOG(R) File 350:(c) 2006 The Thomson Corp. All rts. reserv.

Psoriasis treatment method using pulsed infrared laser source - uses semiconductor diode laser or semiconductor diode laser array with output wavelength of 800 nano-meter and pulse duration in milliseconds range to target vessels with dia of 10-300 microns

20/TI/41 (Item 41 from file: 350)

DIALOG(R) File 350:(c) 2006 The Thomson Corp. All rts. reserv.

Non-contact laser microsurgical appts for e.g. corneal surgery - projects pulsed infrared laser beams onto cornea using multi-facet prismatic axicon lens mounted for movement along projection optical axis and projecting paraxially distributed spots

20/TI/42 (Item 42 from file: 350)

DIALOG(R) File 350:(c) 2006 The Thomson Corp. All rts. reserv.

Compsn. contg. 5-methoxy-psoralen for optical treatment of psoriasis - and other dermatoses e.g. para-psoriasis, vitiligo an atopic eczema, contains natural citrus essence.

20/TI/43 (Item 43 from file: 350)

DIALOG(R) File 350:(c) 2006 The Thomson Corp. All rts. reserv.

Prepn. of smears-imprints of skin leucocytes - involves photosensitising skin, exposing to UV laser, and extracting secretion from sub-epidermal vesicle formed, for prepn. of leucocyte smear

20/TI/44 (Item 44 from file: 350)

DIALOG(R) File 350:(c) 2006 The Thomson Corp. All rts. reserv.

Ablative laser surgery method - using far-ultraviolet radiation projected through mask in pulses at particular area, with sharply defined edges

20/TI/45 (Item 45 from file: 350)

DIALOG(R) File 350:(c) 2006 The Thomson Corp. All rts. reserv.

Appts. treating dermal and epidermal pigmentation abnormalities - has two lasers with different wavelength range and pulse time

20/TI/46 (Item 46 from file: 350)

DIALOG(R)File 350:(c) 2006 The Thomson Corp. All rts. reserv.

5-Methoxy-psoralen for psoriasis treatment - prepd. from phloroglucinol via mono-methyl ether, 6-hydroxy-4-methoxy-coumaran-3-one and coumaran

20/TI/47 (Item 47 from file: 350)

DIALOG(R)File 350:(c) 2006 The Thomson Corp. All rts. reserv.

Sun tan compsn. - contains bergamot oil, ethyl-hexyl (para)-methoxy-cinnamate and trimethyl benzylidene heptanone



ASRC Searcher: Jeanne Horrigan  
Serial 09/976798  
June 20, 2006

24A  
25

File 155:MEDLINE(R) 1951-2006/Jun 19  
(c) format only 2006 Dialog  
File 5:Biosis Previews(R) 1969-2006/Jun W2  
(c) 2006 The Thomson Corporation  
File 73:EMBASE 1974-2006/Jun 19  
(c) 2006 Elsevier Science B.V.  
File 94:JICST-EPlus 1985-2006/Mar W3  
(c)2006 Japan Science and Tech Corp(JST)  
File 144:Pascal 1973-2006/May W4  
(c) 2006 INIST/CNRS  
File 285:BioBusiness(R) 1985-1998/Aug W1  
(c) 2006 The Thomson Corporation  
File 431:MediConf: Medical Con. & Events 1998-2004/Oct B2  
(c) 2004 Dr. R. Steck  
File 65:Inside Conferences 1993-2006/Jun 19  
(c) 2006 BLDSC all rts. reserv.  
File 2:INSPEC 1898-2006/Jun W2  
(c) 2006 Institution of Electrical Engineers  
File 6:NTIS 1964-2006/Jun W2  
(c) 2006 NTIS, Intl Cpyrght All Rights Res  
File 8:Ei Compendex(R) 1970-2006/Jun W2  
(c) 2006 Elsevier Eng. Info. Inc.  
File 35:Dissertation Abs Online 1861-2006/May  
(c) 2006 ProQuest Info&Learning  
File 34:SciSearch(R) Cited Ref Sci 1990-2006/Jun W2  
(c) 2006 Inst for Sci Info  
File 434:SciSearch(R) Cited Ref Sci 1974-1989/Dec  
(c) 1998 Inst for Sci Info

Set	Items	Description
S1	6238518	SKIN OR DERM?? OR EPIDERM? OR TRANSDERMAL?? OR STRATUM() CO- RNEUM OR TISSUE OR SUBDERMAL??
S2	28813	JOULE OR JOULES OR MILLIJOULE? ? OR KILOJOULE? ?
S3	401622	WATT OR WATTS OR MILLIWATT? ? OR KILOWATT? ? OR KW OR KWH - OR W()H OR MW
S4	403943	ATOMIC()MASS() (UNIT OR UNITS) OR CALORY OR CALORIES OR FOO- T() POUND??? OR AMU OR CAL OR F()PDL OR NEWTON() (METER? ? OR METRE? ?) OR DALTON? ? OR DA
S5	249984	CM2 OR CM()2 OR (CENTIMETER? ? OR CENTIMETRE? ?) (N) (SQUARE OR SQUARED)
S6	359307	NEEDLE? ? OR MICRONEEDLE? ? OR MICROPROTRUSION? ? OR MICRO- PROTRUBERANCE? ? OR MICRO() (PROTRUSION? ? OR PROTRUBERANCE? ?) OR NEEDLESTICK? ? OR INJECT?R? ? OR TROCAR? ?
S7	34716	S6(S)S1
S8	32	S7 AND S2
S9	213	S7 AND S3:S4
S10	0	S8 AND S5
S11	15	RD S8 (unique items)
S12	15	Sort S11/ALL/PY,A
S13	168	S7(S)S3:S4
S14	87	RD (unique items)
S15	83	S14 NOT S8
S16	0	(S6(3N)S1) (10N)S3:S4
S17	22	(S6(5N)S1) (S)S3:S4
S18	22	S17 NOT S8
S19	14	RD (unique items)
S20	14	Sort S19/ALL/PY,A

12/3,K/4 (Item 4 from file: 155)

DIALOG(R) File 155:MEDLINE(R)

(c) format only 2006 Dialog. All rts. reserv.

08011306 PMID: 2466246

**The effect of electrode design on the efficiency of delivery of radiofrequency energy to cardiac tissue in vitro.**

Blouin L T; Marcus F I

Department of Internal Medicine, University of Arizona Health Sciences Center, Tucson 85724.

Pacing and clinical electrophysiology - PACE (UNITED STATES) Jan 1989, 12 (1 Pt 2) p136-43, ISSN 0147-8389--Print Journal Code: 7803944

Publishing Model Print

Document type: Journal Article

Languages: ENGLISH

Main Citation Owner: NLM

Record type: MEDLINE; Completed

... RFE) and characteristics of the lesions produced in dog ventricular muscle in vitro. An imbeddable **needle** electrode was found to be the most efficient of the four types studied, with a lesion volume/energy-delivered ratio of 1.10 mm3/ **joule** at an optimum power level of 2.8 **watts** and power density at the electrode...

...levels used below a power density of 0.64 **watt/mm2**, at and above which **tissue** impedance increased abruptly. The electrode catheter typically used for RFE ablations was the least efficient at 0.15 mm3/ **joule** and a power density at the electrode surface of 0.50 **watt/mm2** at 6...

... electrode surface with electrically insulating epoxy caused the RFE current to be directed into the **tissue**, resulting in a threefold increase in efficiency (0.46 mm3/ **joule**) at less than half the power (2.79 **watts**). A flat, thermally insulated electrode with...

...area approached the efficiency of the imbedded electrode with a ratio of 0.69 mm3/ **joule** at a low power density of 0.19 **watt/mm2** and 1.85 **watt** power level. Characteristics of an "ideal" electrode for RFE lesion production in cardiac **tissue** are discussed.

12/3,K/5 (Item 5 from file: 73)

DIALOG(R) File 73:EMBASE

(c) 2006 Elsevier Science B.V. All rts. reserv.

06551682 EMBASE No: 1996212257

**Interstitial laser photocoagulation in liver tumors**

FOTOCOAGULAZIONE INTERSTIZIALE LASER DEI TUMORI DEL FEGATO

Caspani B.; Cecconi P.; Vigna P.D.

Servizio Radiologia Ospedale S. Anna, Via Napoleona, 60-22100 Como Italy

Internista ( INTERNISTA ) (Italy) 1996, 4/2 (99-105)

CODEN: IRNIE ISSN: 1121-9017

DOCUMENT TYPE: Journal; Article

LANGUAGE: ITALIAN SUMMARY LANGUAGE: ENGLISH; ITALIAN

...by a Nd-YAG Laser with optical fibres 0.8 mm in diameter via 18G **needles** positioned with US and/or CT guidance. With power ranging from 5 to 10W, the energy required in each treatment was 800-1.000 **Joule**. The extent of the tumour necrosis was evaluated with non-contrast and contrast-enhanced CT at 48 hours, 2 weeks and every 2 months. Results: Complete necrosis of neoplastic **tissue** was related to decrease in volume of the lesion and lacking the enhancement at CT...

...9 (25.7%) incomplete necrosis. There were no major complications.

Conclusion: ILP is effective for **tissue** destruction of liver tumors. The

therapy is reproducible, easily performed and minimally invasive.

12/3,K/8 (Item 8 from file: 34)  
DIALOG(R) File 34:SciSearch(R) Cited Ref Sci  
(c) 2006 Inst for Sci Info. All rts. reserv.  
05804220 Genuine Article#: WY499 No. References: 7  
**Title: Radiofrequency volumetric reduction of the tongue - A porcine pilot study for the treatment of obstructive sleep apnea syndrome**  
Author(s): Powell NB (REPRINT) ; Riley RW; Troell RJ; Blumen MB; Guilleminault C  
Corporate Source: 750 WELCH RD,SUITE 317/PALO ALTO//CA/94304 (REPRINT); STANFORD UNIV,SLEEP DISORDERS RES CTR/STANFORD//CA/94305  
Journal: CHEST, 1997, V111, N5 (MAY), P1348-1355  
ISSN: 0012-3692 Publication date: 19970500  
Publisher: AMER COLL CHEST PHYSICIANS, 3300 DUNDEE ROAD, NORTHBROOK, IL 60062-2348  
Language: English Document Type: ARTICLE (ABSTRACT AVAILABLE)  
...Abstract: 2 and 12 in stage 3.  
Intervention: RF energy was delivered by a custom-fabricated **needle** electrode and RF generator to the tongue **tissue** of both the in vitro and in vivo models.  
Measurements and results: Microultrasonic crystals were...

12/3,K/9 (Item 9 from file: 144)  
DIALOG(R) File 144:Pascal  
(c) 2006 INIST/CNRS. All rts. reserv.  
13223732 PASCAL No.: 97-0491051  
**Laser-induced interstitial thermotherapy (LITT) with the KTP 532 laser for the treatment of uterine adenomyosis : Laser-induced interstitial thermotherapy and contact laser probe surgery**  
**Lasers in surgery : advanced characterization, therapeutics, and systems VII : San Jose CA, 8-9 February 1997**  
CHAPMAN R; CHAPMAN K  
ANDERSON R Rox, ed; BARTELS Kenneth E, ed; BASS Lawrence S, ed; GREGORY Kenton W, ed; HARRIS David M, ed; LUI Harvey, ed; MALEK Reza S, ed; MULLER Gerhard J, ed; PANKRATOV Michail M, ed; PERLMUTTER Aaron P, ed; REIDENBACH Hans-Dieter, ed; TATE Lloyd P, ed; WATSON Graham M, ed  
Cromwell Hospital, London, United Kingdom; Lewisham Hospital, London, United Kingdom  
International Society for Optical Engineering, Bellingham WA, United States.  
Lasers in surgery : advanced characterization, therapeutics, and systems. Conference, 7 (San Jose CA USA) 1997-02-08  
Journal: SPIE proceedings series, 1997, 2970 554-560  
Language: English  
Copyright (c) 1997 INIST-CNRS. All rights reserved.  
...pigment, was used with a 600  $\mu$ m fibre with a bare tip via a **needle** microstat at laparoscopy. Holes were drilled in the abnormal **tissue** 3cm apart and the laser fibre then slowly withdrawn, the object being to coagulate the surrounding blood vessels and adenomyotic **tissue**. The number of **Joules** required depended on the volume of **tissue** treated.

12/3,K/10 (Item 10 from file: 155)

DIALOG(R) File 155:MEDLINE(R)

(c) format only 2006 Dialog. All rts. reserv.

11603664 PMID: 9465242

**[The interstitial photocoagulation with laser light of liver tumors]**

Fotocoagulazione interstiziale con luce laser dei tumori del fegato.

Caspani B; Cecconi P; Bottelli R; Della Vigna P; Ideo G; Gozzi G

Servizio di Radiologia Diagnostica, Ospedale S. Anna, Como.

La Radiologia medica (ITALY) Oct 1997, 94 (4) p346-54, ISSN  
0033-8362--Print Journal Code: 0177625

Publishing Model Print

Document type: Journal Article ; English Abstract

Languages: ITALIAN

Main Citation Owner: NLM

Record type: MEDLINE; Completed

...6 months. The treatment was performed positioning one to six (18-21 G) modified Chiba **needles** in the lesions to be treated, according to their sizes, under US or CT guidance...

... 400-800 mu) were then inserted and the Laser was fired to administer 1,000 **Joule** /session, with 5-10 W power range. The US and CT patterns of the ILP...

...as did 6 of 11 lesions (54.6%) over 3 cm phi. When residual tumor **tissue** was demonstrated, further ILP sessions were useless. We observed only few complications which resolved spontaneously...

**12/3,K/11 (Item 11 from file: 5)**

DIALOG(R) File 5:Biosis Previews(R)

(c) 2006 The Thomson Corporation. All rts. reserv.

0010876095 BIOSIS NO.: 199799510155

**An effective minimally invasive method of treating adenomyosis by  
interstitial laser photocoagulation with the KTP laser**

AUTHOR: Chapman R (Reprint); Chapman K

AUTHOR ADDRESS: Suite 10, 103-105 Harley St., London W1N 1HD, UK\*\*UK

JOURNAL: Lasers in Medical Science 12 (1): p69-72 1997 1997

ISSN: 0268-8921

DOCUMENT TYPE: Article

RECORD TYPE: Abstract

LANGUAGE: English

...ABSTRACT: laser was used with a 600 mu-m fibre with a bare tip via a **needle** microstat. The fibre was inserted into the abnormal **tissue** at spots 3 cm apart and slowly withdrawn, the object being to coagulate the surrounding blood vessels and adenomyotic **tissue**. The number of **Joules** required depended on the volume of **tissue** treated. Six patients were treated. All became symptom free, and of the two who desired...

**12/3,K/12 (Item 12 from file: 2)**

DIALOG(R) File 2:INSPEC

(c) 2006 Institution of Electrical Engineers. All rts. reserv.

08721615 INSPEC Abstract Number: A2003-20-8760D-002, B2003-10-7520-006

**Title: Current status of radio-frequency technology in the treatment of  
head and neck disease**

Author(s): Goode, R.L.

Author Affiliation: Palo Alto VA Health Care Syst., Stanford Univ. Med.  
Center, Palo Alto, CA, USA

Journal: Proceedings of the SPIE - The International Society for Optical

Engineering Conference Title: Proc. SPIE - Int. Soc. Opt. Eng. (USA)  
vol.4609 p.291-4  
Publisher: SPIE-Int. Soc. Opt. Eng.,  
Publication Date: 2002 Country of Publication: USA  
CODEN: PSISDG ISSN: 0277-786X  
SICI: 0277-786X(2002)4609L:291:CSRF;1-T  
Material Identity Number: C574-2003-072  
U.S. Copyright Clearance Center Code: 0277-786X/02/\$15.00  
Conference Title: Lasers in Surgery: Advanced Characterization,  
Therapeutics, and Systems XII  
Conference Sponsor: SPIE  
Conference Date: 19-22 Jan. 2002 Conference Location: San Jose, CA, USA  
Language: English  
Subfile: A B  
Copyright 2003, IEE

...Abstract: other applications have developed. The newer applications in the head and neck area are: 1) **Tissue** contraction: creation of a controlled lesion by a **needle** electrode inserted into **tissue**, such as the soft palate or tongue, results in later contraction of the **tissue**. The size of the lesion is controlled by monitoring **tissue** temperature and impedance and the energy in **joules**. Contraction of the soft palate and tongue provides improvement in snoring and obstructive sleep apnea...  
... technique has recently been used on motor nerves to eliminate facial wrinkles. 3) Tightening of **skin** and soft **tissue** and surface ablation: RF energy delivered by a monopolar or bipolar electrode can tighten **skin** or destroy surface **tissue** on the **skin** and inside the mouth and nose.

12/3,K/13 (Item 13 from file: 34)  
DIALOG(R)File 34:SciSearch(R) Cited Ref Sci  
(c) 2006 Inst for Sci Info. All rts. reserv.  
12347629 Genuine Article#: 756TN No. References: 23  
**Title: Theoretical analysis of the thermal effects during in vivo tissue electroporation**  
Author(s): Davalos RV; Rubinsky B; Lir LM (REPRINT)  
Corporate Source: Inst Gustave Roussy,UMR 8121, CNRS,39 Rue Camille Desmoulins/F-94805 Villejuif//France/ (REPRINT); Inst Gustave Roussy,UMR 8121, CNRS,F-94805 Villejuif//France/; Univ Calif Berkeley,Biomed Engrn Lab, Dept Mech Engrn,Berkeley//CA/94720  
Journal: BIOELECTROCHEMISTRY, 2003, V61, N1-2 (OCT), P99-107  
ISSN: 1567-5394 Publication date: 20031000  
Publisher: ELSEVIER SCIENCE SA, PO BOX 564, 1001 LAUSANNE, SWITZERLAND  
Language: English Document Type: ARTICLE (ABSTRACT AVAILABLE)  
Abstract: **Tissue** electroporation is a technique that facilitates the introduction of molecules into cells by applying a...  
...the energy from the pulse may be used to adequately estimate the heating in the **tissue**. However, for **needle** electrodes, the geometry, i.e. spacing and diameter, and pulse frequency are critical when determining the thermal distribution in the **tissue**. (C) 2003 Elsevier B.V. All rights reserved.

12/3,K/14 (Item 14 from file: 155)  
DIALOG(R)File 155:MEDLINE(R)  
(c) format only 2006 Dialog. All rts. reserv.  
14257529 PMID: 12691444

**Joule heating during solid tissue electroporation.**

Pliquett U  
University of Bielefeld, Bielefeld, Germany. uwe.pliquett@uni-bielefeld.de  
Medical & biological engineering & computing (England) Mar 2003, 41  
(2) p215-9, ISSN 0140-0118--Print Journal Code: 7704869  
Publishing Model Print  
Document type: Journal Article  
Languages: ENGLISH  
Main Citation Owner: NLM  
Record type: MEDLINE; Completed

The application of high-voltage pulses to biological **tissue** causes not only electroporation, a non-thermal phenomenon of pore creation within a lipid membrane...

... significant heating. Once a biological membrane is porated, the current density increases several times, causing **Joule** heating. A combined experimental and theoretical study is reported. The theoretical temperature rise for a 1.25 kV cm<sup>-1</sup>, 6 ms pulse is about 11.2 K for a **tissue** conductivity of 0.5 S m<sup>-1</sup> (i.e. myocardial **tissue**) during high-voltage application. Owing to the inhomogeneous electric field obtained with the use of **needle** electrodes, the temperature rises first at the electrodes, where the field strength reaches a maximum. Only for highly conductive **tissue** such as muscle was a temperature effect primarily observed in the bulk. Even if the...

12/3,K/15 (Item 15 from file: 155)

DIALOG(R)File 155:MEDLINE(R)

(c) format only 2006 Dialog. All rts. reserv.

14839994 PMID: 15086204

**Radiofrequency ablation of hepatic tissue: a new experimental animal model.**

Zardi Enrico Maria; Picardi Antonio; Borzomati Domenico; Coppola Roberto; Caricato Marco; Galeotti Tommaso; Valeri Sergio; Bianchi Antonella; Brisinda Donatella; Afeltra Antonella; Fenici Riccardo

Interdisciplinary Center for Biomedical Research (CIR), Laboratory of Internal Medicine and Hepatology, Campus Bio-Medico University, Rome, Italy. e.zardi@unicampus.it

Hepato-gastroenterology (Greece) Mar-Apr 2004, 51 (56) p570-4,  
ISSN 0172-6390--Print Journal Code: 8007849

Publishing Model Print  
Document type: Journal Article  
Languages: ENGLISH  
Main Citation Owner: NLM  
Record type: MEDLINE; Completed

... so far unavailable. **METHODOLOGY:** We experimented with a modified system of radiofrequency ablation of liver **tissue** in rat models developing a custom-made **needle** -microelectrode of very small dimensions (0.3x2 mm) and an electrode-tip cooling technique, based...

...is possible to establish beforehand the diameter of thermal liver lesion on the basis of **joules** of applied energy. The greatest increase of liver thermal lesion diameter (8 mm) is obtained with a 250- **joule** (10 W for 25 seconds) thermal energy cooling the electrode- **tissue** interface. **CONCLUSIONS:** Experimental radiofrequency ablation in rat liver is an effective and cheap way to...

20/3,K/2 (Item 2 from file: 73)

DIALOG(R)File 73:EMBASE

(c) 2006 Elsevier Science B.V. All rts. reserv.

00997255 EMBASE No: 1978125582

**Tumor eradication in the rabbit by radiofrequency heating**

Dickson J.A.; Shah S.A.; Waggott D.; Whalley W.B.

Cancer Res. Unit, Univ. Dept. Clin. Biochem., Roy. Victoria Infirm.,  
Newcastle upon Tyne United Kingdom

Cancer Research ( CANCER RES. ) (United States) 1977, 37/7 (I)  
(2162-2169)

CODEN: CNREA

DOCUMENT TYPE: Journal

LANGUAGE: ENGLISH

...of the circuitry developed to produce stable and readily controlled tumor heating. Thermistor and thermocouple **needle** -type sensors were examined for **tissue** temperature measurement in the low-power RF fields. At power levels up to 6 **watts** , temperature readings obtained with thermistors or copper-constantan thermocouples, in association with analog recording systems, were unaffected by the RF field. At 6- to 12- **watt** output, only the thermocouple-galvanometer system remained unaffected, the thermistors reading consistently 1.0-1...

20/3,K/3 (Item 3 from file: 5)

DIALOG(R)File 5:Biosis Previews(R)

(c) 2006 The Thomson Corporation. All rts. reserv.

0002425674 BIOSIS NO.: 197866012158

**INVESTIGATIVE STUDIES OF THE DERMATITIS CAUSED BY THE LARVAE OF THE  
BROWN-TAIL MOTH EUPROCTIS-CHRYSORRHOEA LEPIDOPTERA LYMANTRIIDAE PART 3  
CHEMICAL ANALYSIS OF SKIN REACTIVE SUBSTANCES**

AUTHOR: DE JONG M C J M (Reprint); BLEUMINK E

AUTHOR ADDRESS: DEP DERMATOL, STATE UNIV, GRONINGEN, NETH\*\*NETHERLANDS

JOURNAL: Archiv fuer Dermatologische Forschung 259 (3): p247-262 1977

ISSN: 0003-9187

DOCUMENT TYPE: Article

RECORD TYPE: Abstract

LANGUAGE: ENGLISH

...ABSTRACT: introduced into the **skin**, aided by mechanical traumatic action arising from the penetration of the **needle** -pointed hairs into the **cutaneous tissue**.

20/3,K/6 (Item 6 from file: 73)

DIALOG(R)File 73:EMBASE

(c) 2006 Elsevier Science B.V. All rts. reserv.

03834783 EMBASE No: 1989003737

**Photodissociation of oxyhemoglobin as a proposed therapeutic modality**

Itzkan I.; Bourgelais D.B.C.

Medical Laser R&D Corporation, Woburn, MA 01801 United States

Lasers in the Life Sciences ( LASERS LIFE SCI. ) (United Kingdom) 1988,  
2/3 (245-251)

CODEN: LLSCE ISSN: 0886-0467

DOCUMENT TYPE: Journal

LANGUAGE: ENGLISH SUMMARY LANGUAGE: ENGLISH

...in the wavelength range from 600 to 650 nm, with an **irradiance** of about 20 **mw /cmsup 2**, the residual Oinf 2 remaining in depleted venous

blood can be made available...  
...fiber optics make possible minimally invasive delivery of this irradiance through endoscopes, catheters, and hypodermic **needles** to nearly any body **tissue**. Helium neon and dye lasers which can provide appropriate irradiance and wavelengths are commercially available.

**20/3,K/7 (Item 7 from file: 155)**

DIALOG(R)File 155:MEDLINE(R)

(c) format only 2006 Dialog. All rts. reserv.

09334847 PMID: 1512473

**Microdialysis of the interstitial water space in human skin in vivo: quantitative measurement of cutaneous glucose concentrations.**

Petersen L J; Kristensen J K; Bulow J

Department of Clinical Physiology, Bispebjerg University Hospital, Copenhagen, Denmark.

Journal of investigative dermatology (UNITED STATES) Sep 1992, 99 (3) p357-60, ISSN 0022-202X--Print Journal Code: 0426720

Publishing Model Print

Document type: Journal Article

Languages: ENGLISH

Main Citation Owner: NLM

Record type: MEDLINE; Completed

... 2,000 Da molecular weight cutoff) were glued to nylon tubings and inserted in forearm **skin** by means of a fine **needle**. Dialysis fibers were inserted in duplicate. Seven subjects were investigated after an overnight fast. Intradermal...

**20/3,K/11 (Item 11 from file: 35)**

DIALOG(R)File 35:Dissertation Abs Online

(c) 2006 ProQuest Info&Learning. All rts. reserv.

01784048 ORDER NO: AADAA-I9994434

**Microfabricated needles for transdermal drug delivery**

Author: McAllister, Devin Vincent

Degree: Ph.D.

Year: 2000

Corporate Source/Institution: Georgia Institute of Technology (0078)

Source: VOLUME 61/11-B OF DISSERTATION ABSTRACTS INTERNATIONAL.

PAGE 6003. 189 PAGES

ISBN: 0-493-01418-7

...up to 10,000-fold in vitro. Here we have used these same **needles** to increase **skin** permeability similarly to large proteins (i.e., insulin hexamers (34 kDa) and bovine serum albumin...

**20/3,K/14 (Item 14 from file: 5)**

DIALOG(R)File 5:Biosis Previews(R)

(c) 2006 The Thomson Corporation. All rts. reserv.

0015959918 BIOSIS NO.: 200600305313

**Multiple antenna ablation apparatus and method**

AUTHOR: Gough Edward J; Stein Alan A; Edwards Stuart D

AUTHOR ADDRESS: Menlo Pk, CA USA\*\*USA

JOURNAL: Official Gazette of the United States Patent and Trademark Office  
Patents OCT 25 2005 2005

PATENT NUMBER: US 06958062 PATENT DATE GRANTED: October 25, 2005 20051025



PATENT CLASSIFICATION: 606-41 PATENT ASSIGNEE: Rita Medical Systems, Inc.  
PATENT COUNTRY: USA  
ISSN: 0098-1133  
DOCUMENT TYPE: Patent  
RECORD TYPE: Abstract  
LANGUAGE: English

...ABSTRACT: ablation is achieved without impeding out any of the deployed  
antennas when 5 to 200 **watts** of electromagnetic energy is delivered  
from the electromagnetic energy source to the multiple antenna ablation...

File 149:TGG Health&Wellness DB(SM) 1976-2006/Jun W1  
(c) 2006 The Gale Group  
File 129:PHIND(Archival) 1980-2006/Jun W2  
(c) 2006 Informa UK Ltd  
File 135:NewsRx Weekly Reports 1995-2006/Jun W2  
(c) 2006 NewsRx  
File 148:Gale Group Trade & Industry DB 1976-2006/Jun 20  
(c)2006 The Gale Group  
File 16:Gale Group PROMT(R) 1990-2006/Jun 19  
(c) 2006 The Gale Group  
File 160:Gale Group PROMT(R) 1972-1989  
(c) 1999 The Gale Group  
File 441:ESPICOM Pharm&Med DEVICE NEWS 2006/Jan W2  
(c) 2006 ESPICOM Bus.Intell.  
File 9:Business & Industry(R) Jul/1994-2006/Jun 19  
(c) 2006 The Gale Group  
File 98:General Sci Abs 1984-2005/Jan  
(c) 2006 The HW Wilson Co.

Set	Items	Description
S1	565662	<b>SKIN</b> OR <b>DERM??</b> OR <b>EPIDERM?</b> OR <b>TRANSDERMAL??</b> OR <b>STRATUM()</b> CO-RNEUM OR <b>TISSUE</b> OR <b>SUBDERMAL??</b>
S2	3650	<b>JOULE</b> OR <b>JOULES</b> OR <b>MILLIJOULE?</b> ? OR <b>KILOJOULE?</b> ?
S3	339907	<b>WATT</b> OR <b>WATTS</b> OR <b>MILLIWATT?</b> ? OR <b>KILOWATT?</b> ? OR <b>KW</b> OR <b>KWH</b> - OR <b>W()</b> H OR <b>MW</b>
S4	233079	<b>ATOMIC()</b> <b>MASS()</b> ( <b>UNIT</b> OR <b>UNITS</b> ) OR <b>CALORY</b> OR <b>CALORIES</b> OR <b>FOOT()</b> <b>POUND???</b> OR <b>AMU</b> OR <b>CAL</b> OR <b>F()</b> <b>PDL</b> OR <b>FPDL</b> OR <b>NEWTON()</b> ( <b>METER?</b> ? OR <b>METRE?</b> ?) OR <b>DALTON?</b> ? OR <b>DA</b>
S5	8822	<b>CM2</b> OR <b>CM()</b> 2 OR ( <b>CENTIMETER?</b> ? OR <b>CENTIMETRE?</b> ?) ( <b>N</b> ) ( <b>SQUARE</b> OR <b>SQUARED</b> )
S6	82529	<b>NEEDLE?</b> ? OR <b>MICRONEEDLE?</b> ? OR <b>MICROPROTRUSION?</b> ? OR <b>MICRO-PROTRUBERANCE?</b> ? OR <b>MICRO()</b> ( <b>PROTRUSION?</b> ? OR <b>PROTRUBERANCE?</b> ?) OR <b>NEEDLESTICK?</b> ? OR <b>INJECT?R?</b> ? OR <b>TROCAR?</b> ?
S7	331	S2(1W)S5 OR J()S5
S8	121	(KJ OR MJ) (1W)S5
S9	87	S1(S)S7:S8
S10	0	S6(S)S9
S11	7596	S1(S)S6
S12	0	S6(S)S7:S8
S13	2	<b>S11(S)S2</b>
S14	32	S11(S)S3:S4
S15	32	S14 NOT S13
S16	29	RD (unique items)
S17	29	<b>Sort S16/ALL/PD,A</b>
S18	87	S9 NOT S13:S14
S19	32	S1(10N)S7:S8
S20	28	RD (unique items)
S21	28	<b>Sort S20/ALL/PD,A</b>
S22	19	S18 AND (S1/TI OR S7/TI OR S8/TI)
S23	11	S22 NOT S19
S24	11	RD (unique items)
S25	11	<b>Sort S24/ALL/PD,A</b>

13/7/1 (Item 1 from file: 148)

DIALOG(R)File 148:Gale Group Trade & Industry DB  
(c)2006 The Gale Group. All rts. reserv.

11603825 SUPPLIER NUMBER: 58272199 (THIS IS THE FULL TEXT)

**Trimedynne Issued U.S. Patent Covering Lasers for Unique Applications in Cosmetic Surgery.**

Business Wire, 0221  
Dec 16, 1999

TEXT:

IRVINE, Calif.--(BUSINESS WIRE)--Dec. 16, 1999--

Trimedynne Inc. (NASDAQ\NMS:TMED) Thursday announced the U.S. Patent and Trademark Office has granted it U.S. Patent No. 5,984,915, which covers a wide range of wavelengths of laser energy for **subcutaneous** or "under the **skin**" use.

The patent also covers the **subcutaneous** use of laser energy to achieve permanent hair removal by applying the laser energy to hair follicles below the surface of the **skin**. Trimedynne has two additional patent applications on file covering both the **subcutaneous** use of wavelengths of laser energy not covered by the recently issued patent and devices for producing the exact amount of laser energy desired.

Laser energy is presently being transmitted through the **skin** to erase small wrinkles by removing old cells and heating the **tissue** beneath the **skin** to cause collagen and new cells to grow, filling out the **tissue**. However, severe erythema (sunburn effect) or **skin** discoloration often occurs and takes weeks to subside. Deeper wrinkles, creases and fat pads, even with surface cooling, cannot presently be effectively treated with laser energy delivered through the **skin** without causing permanent **skin** damage or discoloration. Likewise, while small, unattractive veins beneath the **skin**, such as spider veins, can be coagulated by transmitting laser energy through the **skin**, larger veins, such as varicose veins, even with surface cooling, cannot be effectively coagulated by delivering laser energy through the **skin** without permanent damage or discoloration.

Trimedynne's patent covers the use of extremely short (1 to 100 microsecond) pulses of very small amounts (one-thousandth to one-tenth of a **joule** ) of laser energy through a tiny optical fiber inserted under the **skin** . The optical fiber is so small, it can be inserted through the **needle** puncture remaining after a local anesthetic is injected. The use of laser energy under the **skin** , where heat cannot escape, requires extremely small amounts of energy to be precisely applied in very short pulses to avoid thermal damage and discoloration. Trimedynne conducted extensive **tissue** and animal testing to exactly define the optimum laser energy parameters for safe and effective **subcutaneous** use.

Trimedynne has been developing a laser based on the patent for use by cosmetic (plastic) surgeons, **dermatologists** and other physicians. The development of this laser was put on hold while Trimedynne completed the development of a new, fully automated, ECG synchronized, laser heart revascularization system for the treatment of angina for its subsidiary, Cardiodyne Inc. Since the heart laser project is nearing completion, Trimedynne plans to reactivate the development of its cosmetic laser, which has already been cleared for sale by the U.S. FDA for a variety of cosmetic and **dermatology** applications, and plans to develop other lasers for cosmetic use.

Trimedynne is a leading manufacturer of surgical lasers located in Irvine. Trimedynne manufactures a family of Holmium and Nd:YAG lasers for use in urology, orthopedics, ENT surgery, gynecology and general surgery to treat a variety of diseases and medical conditions.

"Safe Harbor" Statement Under the Private Securities Litigation Reform Act:

With the exception of any historical information contained in this release, the matters described herein may contain forward-looking

statements that involve risk and uncertainties that may, individually or mutually, impact the matters herein described. Such risks may be outside the control of the company, and may be detailed from time to time in the company's periodic SEC reports.

COPYRIGHT 1999 Business Wire

17/3,K/1 (Item 1 from file: 160)

DIALOG(R)File 160:Gale Group PROMT(R)

(c) 1999 The Gale Group. All rts. reserv.

00622411

**Acupuncture performed by stimulating a patient's 'pressure points' with laserbeams vs traditional needles is painless, hygienic and quick, according to some Europeans and the People's Republic of China, where conventional acupuncture was invented.**

Laser Focus December, 1980 p. 36-381

...developers report that in some cases the laser approach appears more effective than the traditional **needles**. Laser acupuncture is administered with systems based on low-power helium-neon lasers, typically emitting 2 mW. Most of the European systems are made by the advanced technology div of Messerschmitt-Bolkow...

...In the firm's instrument--'akupLas HLW'--the laserbeam is carried to the patient's **skin** by a fiberoptic cable and probe. An electrical conductor surrounding the tip of the probe measures the **skin**'s electrical resistance for initial detection of the correct application point. The point is then...

17/3,K/19 (Item 19 from file: 149)

DIALOG(R)File 149:TGG Health&Wellness DB(SM)

(c) 2006 The Gale Group. All rts. reserv.

01865172 SUPPLIER NUMBER: 56881525 (USE FORMAT 7 OR 9 FOR FULL TEXT)

**The Value of Transbronchial Needle Aspiration in the Diagnosis of Peripheral Pulmonary Lesions(\*)**.

Reichenberger, Frank; Weber, Janos; Tamm, Michael; Bolliger, Christoph T.; Dalquen, Peter; Perruchoud, Andre P.; Soler, Markus  
Chest, 116, 3, 704

Sept, 1999

PUBLICATION FORMAT: Magazine/Journal; Refereed ISSN: 0012-3692

LANGUAGE: English RECORD TYPE: Fulltext TARGET AUDIENCE: Professional

WORD COUNT: 3088 LINE COUNT: 00305

... brushing and TBB of the lesion were performed under fluoroscopic guidance.

TBNA was performed with MW 522 **needle** catheters (Mill-Rose Laboratories; Mentor, OH). The retractable 22-gauge **needle** with a length of 13 mm lies within a catheter of 1.8 mm outer diameter with a rounded hub at its distal end. The **needle** is connected to a wire with a flexible, 10-cm-long portion at its distal end.(12) During bronchoscopy, the catheter is guided under fluoroscopic control. After the **needle** is advanced into the **tissue**, suction is applied with a 20-mL syringe via a side port at the proximal...

17/3,K/25 (Item 25 from file: 149)

DIALOG(R)File 149:TGG Health&Wellness DB(SM)

(c) 2006 The Gale Group. All rts. reserv.

02343220        SUPPLIER NUMBER: 112127494        (USE FORMAT 7 OR 9 FOR FULL TEXT)  
**The value of flexible transbronchial needle aspiration in the diagnosis of  
stage I sarcoidosis \*.**

Trisolini, Rocco; Agli, Luigi Lazzari; Cancellieri, Alessandra; Poletti,  
Venerino; Tinelli, Carmine; Baruzzi, Giuseppe; Patelli, Marco  
Chest, 124, 6, 2126(5)

Dec, 2003

PUBLICATION FORMAT: Magazine/Journal; Refereed    ISSN: 0012-3692

LANGUAGE: English    RECORD TYPE: Fulltext    TARGET AUDIENCE: Professional

WORD COUNT:    3037        LINE COUNT:    00271

...        with the patient in a supine position. TBNA was performed with a  
19-gauge histology **needle** ( MW -319; Mill Rose Laboratories; Mentor, OH),  
which allows one to obtain both histologic and cytologic...

...any other sampling procedure, in order to avoid the risk of  
contamination by secretions or **tissue** fragments. All TBNA specimens from  
a single site were used as a combined specimen. After removal of the  
**needle** , each specimen was collected on clean glass slides. In those cases  
in which a histologic core of **tissue** was obtained, the sample was removed  
gently from the slide and placed in formalin solution...

21/3,K/1        (Item 1 from file: 160)

DIALOG(R)File 160:Gale Group PROMT(R)

(c) 1999 The Gale Group. All rts. reserv.

00622413

**A laser technique appears able to treat cervical cancer about as  
effectively as conventional therapies but at a much lower cost,  
according to physicians at Beth Israel Hospital and Harvard Medical  
School who used a CO2 laser to heal 38 of 60 women.**

Laser Focus    December, 1980    p. 46-48

Initially, 0.5 sec bursts focused to intensities of 30-32 J / cm<sup>2</sup>  
were used to destroy tumor **tissue** to a depth of 5 mm. However, only 10  
of the first 22 patients treated...

21/3,K/3        (Item 3 from file: 149)

DIALOG(R)File 149:TGG Health&Wellness DB(SM)

(c) 2006 The Gale Group. All rts. reserv.

01182420        SUPPLIER NUMBER: 07378757        (USE FORMAT 7 OR 9 FOR FULL TEXT)

**Cutaneous toxicity (cont.). (column)**

Garrett, Anne Wolven

Drug & Cosmetic Industry, v144, n2, p12(1)

Feb, 1989

DOCUMENT TYPE: column    PUBLICATION FORMAT: Magazine/Journal    ISSN:

0012-6527    LANGUAGE: English    RECORD TYPE: Fulltext    TARGET AUDIENCE: Trade

WORD COUNT:    721        LINE COUNT:    00069

...        fiber hyperplasia and the characteristic UVA-induced abnormal  
deposits of proteo and glycosaminoglycans at the **dermal - epidermal**  
junction after only 4000 J / cm ( 2 )." Results of a second study, in  
which mice were chronically exposed to a high density...

...findings. Histochemical stains revealed that elastic fiber hyperplasia  
and increased proteo and glycosaminoglycans at the **dermal - epidermal**  
junction, first observed at 400 J / cm ( 2 ), were accentuated at 8000.

In follow-up study, hairless mice received thrice weekly radiation  
with...

21/3,K/7 (Item 7 from file: 149)  
DIALOG(R)File 149:TGG Health&Wellness DB(SM)  
(c) 2006 The Gale Group. All rts. reserv.  
01363806 SUPPLIER NUMBER: 12435950 (USE FORMAT 7 OR 9 FOR FULL TEXT)  
**The efficacy of laser therapy for musculoskeletal and skin disorders: a  
criteria-based meta-analysis of randomized clinical trials.**  
Beckerman, Heleen; de Bie, Rob A.; Bouter, Lex M.; De Cuyper, Hugo J.;  
Oostendorp, Rob A.B.  
Physical Therapy, v72, n7, p483(9)  
July, 1992  
PUBLICATION FORMAT: Magazine/Journal ISSN: 0031-9023 LANGUAGE: English  
RECORD TYPE: Fulltext; Abstract TARGET AUDIENCE: Professional  
WORD COUNT: 4082 LINE COUNT: 00350  
... also investigated the relationship between the laser dosage  
(measured as the energy density, given in **joules per square centimeter**  
at the level of the target **tissue** ) and the outcome of the trials, as  
well as the relationship between the dosage and...

21/3,K/8 (Item 8 from file: 9)  
DIALOG(R)File 9:Business & Industry(R)  
(c) 2006 The Gale Group. All rts. reserv.  
01564359 Supplier Number: 24247003 (USE FORMAT 7 OR 9 FOR FULLTEXT)  
**New Patents: VISX**  
**(VISX granted patent for an argon-fluoride excimer laser for laser eye  
surgery)**  
Medical Laser Insight, v 6, n 5, p 7  
May 1998  
DOCUMENT TYPE: Newsletter (United States)  
LANGUAGE: English RECORD TYPE: Fulltext  
WORD COUNT: 247  
TEXT:  
...up. Each micron of the depth of a 200 micron deep groove formed in  
corneal **tissue** , for example, resulted from the application of 1 **joule**  
per **square centimeter** of radiation, from a series of **pulses delivered**  
at intensities of between 100 mJ and...

21/3,K/9 (Item 9 from file: 16)  
DIALOG(R)File 16:Gale Group PROMT(R)  
(c) 2006 The Gale Group. All rts. reserv.  
06140525 Supplier Number: 53904702 (USE FORMAT 7 FOR FULLTEXT)  
**New lasers can fill the gap between CO2 and Er:YAG.**  
Biesman, Brian  
Ophthalmology Times, v24, n3, p6(1)  
Feb 1, 1999  
Language: English Record Type: Fulltext  
Document Type: Magazine/Journal; Trade  
Word Count: 1177  
(USE FORMAT 7 FOR FULLTEXT)  
TEXT:  
...to use the scanner. The laser is powerful enough to generate fluences in  
the 30 **J / cm2** range, enough to ablate about 120 [micro sign]m of **tissue**  
with each pass. In contrast to short pulse Er:YAG resurfacing, when  
operated in "coagulative..."

21/3,K/11 (Item 11 from file: 9)  
DIALOG(R)File 9:Business & Industry(R)  
(c) 2006 The Gale Group. All rts. reserv.  
02224239 Supplier Number: 25756306 (USE FORMAT 7 OR 9 FOR FULLTEXT)  
**Low-cost light-based system shakes up hair-removal market**  
**(Radiancy (Orangeburg, NY) introduces SpaTouch photo-epilation system for**  
**\$15,000, which requires six times less energy fluence than laser-based**  
**systems)**  
Laser Focus World, v 36, n 7, p 64+  
July 2000  
DOCUMENT TYPE: Journal ISSN: 1043-8092 (United States)  
LANGUAGE: English RECORD TYPE: Fulltext  
WORD COUNT: 761  
(USE FORMAT 7 OR 9 FOR FULLTEXT)  
TEXT:  
...SpaTouch uses six times less energy fluence than the laser hair-removal  
systems-4-7 J / cm<sup>2</sup> (depending on the skin type) vs. an average of  
25-40 J / cm<sup>2</sup> . In addition to lowering the overall system size and cost,  
this low-energy approach also...

21/3,K/13 (Item 13 from file: 16)  
DIALOG(R)File 16:Gale Group PROMT(R)  
(c) 2006 The Gale Group. All rts. reserv.  
09827547 Supplier Number: 87021926 (USE FORMAT 7 FOR FULLTEXT)  
**Nonablative techniques in vogue for facial rejuvenation : Myriad ablative**  
**procedures provide solid results, but burgeoning nonablative modalities**  
**are popular.**  
Guttman, Cheryl  
Dermatology Times, v23, n5, p65  
May, 2002  
Language: English Record Type: Fulltext  
Document Type: Magazine/Journal; Trade  
Word Count: 1438  
... alone.  
The intense pulsed light system has been used with high fluences, 30  
to 50 J / cm<sup>2</sup> , in order to achieve a dermal effect and with cooling to  
protect the epidermis. Published reports evaluating this technology  
describe its...

21/3,K/15 (Item 15 from file: 16)  
DIALOG(R)File 16:Gale Group PROMT(R)  
(c) 2006 The Gale Group. All rts. reserv.  
10424850 Supplier Number: 94207838 (USE FORMAT 7 FOR FULLTEXT)  
**New technology, patient demand spur cosmetic surgery advances: from new**  
**uses for excimer laser to rebirth of injectable silicone, march of**  
**progress continues. (Cosmetic Dermatology).**  
Kuznar, Wayne  
Dermatology Times, v23, n9, p70  
Sept, 2002  
Language: English Record Type: Fulltext  
Document Type: Magazine/Journal; Trade

Word Count: 1113

... 100 to 350 **mJ/cm2**, with total UVB doses of 1,000 to 2,000 **mJ / cm2**. Immunohistochemical staining following the treatments indicated the presence of patchy **epidermal** melanin. The only side effect reported was mild erythema.

The same authors investigated treatment of...

**21/3,K/19 (Item 19 from file: 148)**

DIALOG(R)File 148:Gale Group Trade & Industry DB

(c)2006 The Gale Group. All rts. reserv.

15775211 SUPPLIER NUMBER: 98165820 (USE FORMAT 7 OR 9 FOR FULL TEXT)

**An exciting new ingredient comes to sun care. (Anti-Aging).**

Shaath, Nadim A.; Shaath, Mona N.; Tsao-Nivaggioli, Belinda; Rooney, Diane  
Soap & Cosmetics, 78, 8, 39(3)

Nov, 2002

ISSN: 1523-9225 LANGUAGE: English RECORD TYPE: Fulltext

WORD COUNT: 1412 LINE COUNT: 00120

... untreated **skin** were exposed to two levels of UV-B exposure, 150 mJ and 250 **mJ per square centimeter**. Creatine-treated **skin** showed dramatic reductions in dead **skin** cells, as shown in Figure 4. (5)  
Protection from UV-B damage means protection against...

**21/3,K/20 (Item 20 from file: 135)**

DIALOG(R)File 135:NewsRx Weekly Reports

(c) 2006 NewsRx. All rts. reserv.

0000084668 (USE FORMAT 7 OR 9 FOR FULLTEXT)

**Oxidative stress and UVB damage is significantly reduced by topical resveratrol**

Cancer Weekly, April 15, 2003, p.145

DOCUMENT TYPE: Expanded Reporting LANGUAGE: English

RECORD TYPE: FULLTEXT

WORD COUNT: 387

... to SKH-1 hairless mice was found to result in significant inhibition of UVB (180 **mJ / cm2**) mediated increase in bifold **skin** thickness and **skin** edema.

"The resveratrol treatment to mouse **skin** was also found to result in significant inhibition...

**21/3,K/23 (Item 23 from file: 135)**

DIALOG(R)File 135:NewsRx Weekly Reports

(c) 2006 NewsRx. All rts. reserv.

0000150676 (USE FORMAT 7 OR 9 FOR FULLTEXT)

**Reconstructed skin model useful for drug evaluation**

Obesity, Fitness & Wellness Week, August 7, 2004, p.303

DOCUMENT TYPE: Expanded Reporting LANGUAGE: English

RECORD TYPE: FULLTEXT

WORD COUNT: 369

... on LA permeation was examined," according to the report. "Low-dose UVB irradiation (0.03 **J / cm 2** for three times), which activated melanocytes in the **skin**, did not influence the extent of LA permeation, while high-dose irradiation (0.30 **J**...



21/3,K/24 (Item 24 from file: 135)  
DIALOG(R)File 135:NewsRx Weekly Reports  
(c) 2006 NewsRx. All rts. reserv.  
0000240497 (USE FORMAT 7 OR 9 FOR FULLTEXT)  
**Epidermal damage studied, transcriptional factor induction clarified**  
Life Science Weekly, September 6, 2005, p.109  
DOCUMENT TYPE: Expanded Reporting LANGUAGE: English  
RECORD TYPE: FULLTEXT  
WORD COUNT: 396  
... colleagues, Cleveland Clinic Foundation.  
"SKH-1 hairless mice were exposed to a UV source (80 mJ per cm2 ;  
similar to 74% UVB, similar to 16% UVA), and skin biopsies examined by  
immunohistology and immunoprecipitation.  
"Compared with non-irradiated epidermis, CHOP expression was  
significantly...

21/3,K/25 (Item 25 from file: 135)  
DIALOG(R)File 135:NewsRx Weekly Reports  
(c) 2006 NewsRx. All rts. reserv.  
0000242042 (USE FORMAT 7 OR 9 FOR FULLTEXT)  
**Epidermal damage-responsive transcription factor studied, induction  
chronicled**  
Life Science Weekly, September 13, 2005, p.90  
DOCUMENT TYPE: Expanded Reporting LANGUAGE: English  
RECORD TYPE: FULLTEXT  
WORD COUNT: 390  
... cell (SBC) formation.  
"SKH-1 hairless mice were exposed to a ultraviolet (UV) source (80 mJ  
per cm2 ; approximately 74% UVB, approximately 16% UVA), and skin  
biopsies examined by immunohistology and immunoprecipitation.  
"Compared with non-irradiated epidermis, CHOP expression was  
significantly...

21/3,K/27 (Item 27 from file: 135)  
DIALOG(R)File 135:NewsRx Weekly Reports  
(c) 2006 NewsRx. All rts. reserv.  
0000253652 (USE FORMAT 7 OR 9 FOR FULLTEXT)  
**New findings in the area of apoptosis described**  
Life Science Weekly, November 1, 2005, p.29  
DOCUMENT TYPE: Expanded Reporting LANGUAGE: English  
RECORD TYPE: FULLTEXT  
WORD COUNT: 879  
... colleagues, Cleveland Clinic Foundation.  
"SKH-1 hairless mice were exposed to a UV source (80 mJ per cm2 ;  
similar to 74% UVB, similar to 16% UVA), and skin biopsies examined by  
immunohistology and immunoprecipitation.  
"Compared with non-irradiated epidermis, CHOP expression was  
significantly...

25/7/2 (Item 2 from file: 9)  
DIALOG(R)File 9:Business & Industry(R)  
(c) 2006 The Gale Group. All rts. reserv.  
01686630 Supplier Number: 24402483 (THIS IS THE FULLTEXT)

**Pendulaser**

(KMC Systems (Merrimack, NH) has developed the Pendulaser CO2 laser system for laser surgery; a computer controls the depth of tissue ablation)

Medical Laser Insight, p 13

October 1998

WORD COUNT: 251

**TEXT:**

This CO2 Laser System is a unique 15 Watt laser designed for physicians by the pioneer of laser surgery, Professor Isaac Kaplan.

HIGH PERFORMANCE -- The 0.1 mm spot size achieves power densities comparable to much higher-powered lasers. The result is an affordable and small laser that delivers the energy required for most surgical procedures.

FLEXIBLE TREATMENT PARAMETERS -- The Pendulaser system includes a sophisticated Computer Patter Generator (CPG) scanner for charfree tissue vaporization. The scanner offers precise control over the depth of tissue ablation while minimizing thermal injury. Unique to the Pendulaser is a wide range of fluence settings, from 6-48 J / cm<sup>2</sup>, with pulse widths from 396-1000 usec. The CPG is equipped with a variety of shapes and scan sizes for your added convenience. This versatility and accuracy of treatment parameters allows the physician to treat the patient with superficial rhytides, as well as deeper photo-damaged skin, applying a minimum of laser passes.

PORTABILITY -- Disconnect the communication cable from the Laser Head and Service Module to easily transport the light-weight Pendulaser to your satellite offices in its convenient carrying case.

SIMPLE & RELIABLE -- The unique design of the Pendulaser provides a high quality and compact beam delivery system. This concept incorporates fewer optical mirrors and eliminates focusing lenses in the articulated arm, thereby enhancing the overall reliability of the system. The Pendulaser is essentially maintenance-free. Its modular design allows for easy service and routine preventative maintenance.

KMC Systems -- 220 Daniel Webster Highway -- Merrimack -- NH 03054 -- toll free (888) 886-7550

Copyright 1998 Biomedical Market Newsletter Inc.

25/3,K/5 (Item 5 from file: 16)

DIALOG(R)File 16:Gale Group PROMT(R)

(c) 2006 The Gale Group. All rts. reserv.

10424872 Supplier Number: 94207860 (USE FORMAT 7 FOR FULLTEXT)

**Selective dermal heating lowers lesion counts: pilot, split-side study of 26 patients shows 1450nm diode laser safe for inflammatory acne. (Acne).**

Guttman, Cheryl

Dermatology Times, v23, n9, pS4

Sept, 2002

Language: English Record Type: Fulltext

Document Type: Magazine/Journal; Trade

Word Count: 759

... wide range of available effective treatments for acne.

The initial acne study enrolled patients with skin types I to V ...underwent four treatments spaced three to four weeks apart using fluences of 16 to 18 J / cm<sup>2</sup>. Mean acne lesion counts for the laser and control sites were 5.43 and 5...

25/3,K/6 (Item 6 from file: 9)

DIALOG(R)File 9:Business & Industry(R)

(c) 2006 The Gale Group. All rts. reserv.  
02931426 Supplier Number: 92377762 (USE FORMAT 7 OR 9 FOR FULLTEXT)  
**New Skin Rejuvenation Technologies Proliferate.**  
**(lasers)**

Medical Laser Insight, p NA  
September 30, 2002  
DOCUMENT TYPE: Newsletter (United States)  
LANGUAGE: English RECORD TYPE: Fulltext  
WORD COUNT: 2341  
TEXT:

...to illuminate a 400 nm to 1200 nm spectrum. "We can treat all types of **skin** ," said Arnon Epstein, vice president of marketing and business development at Radiance. The optical **fluence range is 2 to 10 J / cm<sup>2</sup>** , with an effective fluence range of 10 to 50 **J / cm<sup>2</sup>**.^

25/3,K/8 (Item 8 from file: 16)  
DIALOG(R)File 16:Gale Group PROMT(R)  
(c) 2006 The Gale Group. All rts. reserv.  
10293398 Supplier Number: 98334826 (USE FORMAT 7 FOR FULLTEXT)  
**New approach to hair removal: combination radiofrequency/IPL used with darker skin . (Cosmetic Dermatology).**

Guttman, Cheryl  
**Dermatology Times**, v24, n2, p77  
Feb, 2003  
Language: English Record Type: Fulltext  
Document Type: Magazine/Journal; Trade  
Word Count: 723

... the 69 subjects had **skin** types IV, V, or VI.  
Treatment parameters were based on **skin** type. The optical energy was delivered at a pulse duration of 30 milliseconds and with fluences ranging from 14 to 30 **J / cm<sup>2</sup>** (mean 24 **J / cm<sup>2</sup>** ). The radiofrequency energy was delivered at a pulse duration of 200 milliseconds with a density ranging from 10 to 20 **J / cm<sup>2</sup>** (mean 15 **J / cm<sup>2</sup>** ).

The selected parameters were first evaluated at a test area. The treatment is delivered following...

File 350:Derwent WPIX 1963-2006/UD,UM &UP=200638

(c) 2006 The Thomson Corp.

File 349:PCT FULLTEXT 1979-2006/UB=20060615,UT=20060608

(c) 2006 WIPO/Univentio

File 348:EUROPEAN PATENTS 1978-2006/ 200624

(c) 2006 European Patent Office

Set	Items	Description
S1	48	AU='TRAUTMAN J' OR AU='TRAUTMAN J C' OR AU='TRAUTMAN JOSEPH C' OR AU='TRAUTMAN JOSEPH CREAGAN'
S2	33	AU='KEENAN R' OR AU='KEENAN R L'
S3	23	AU='KEENAN RICH' OR AU='KEENAN RICHARD' OR AU='KEENAN RICHARD L'
S4	6	AU='SAMIEE A P' OR AU='SAMIEE AHMAD P'
S5	3	AU='LIN WEI QI'
S6	3	AU='LIN W Q'
S7	102	AU='CORMIER M' OR AU='CORMIER M J':AU='CORMIER M J N'
S8	94	AU='CORMIER MICHEL' OR AU='CORMIER MICHEL J':AU='CORMIER MICHEL JN'
S9	32	AU='MATRIANO J' OR AU='MATRIANO J A':AU='MATRIANOO J A'
S10	115	AU='DADDONA P' OR AU='DADDONA P E' OR AU='DADDONA PETER' OR AU='DADDONA PETER E'
S11	17	AU='LIN WEIQI'
S12	1501	AU='LIN W'
S13	608	MICROPROTRUSION? ? OR MICRO()PROTRUSION? ?
S14	20261	JOULE? ? OR J()CM2
S15	3	S1:S12 AND S13(S)S14
S16	63	(S1:S12 AND S13:S14) NOT S15
S17	84204	IC=A61B-005?
S18	10	S16 AND S17
S19	10	IDPAT (sorted in duplicate/non-duplicate order)
S20	4	IDPAT (primary/non-duplicate records only)

15/3,AB,IC/1 (Item 1 from file: 350)

DIALOG(R)File 350:Derwent WPIX

(c) 2006 The Thomson Corp. All rts. reserv.

014642538

WPI Acc No: 2002-463242/200249

XRAM Acc No: C02-131655

XRPX Acc No: N02-365242

**Delivering or sampling method of agent involves forming micro-slits through stratum corneum, by causing micro-protrusion to impact with stratum corneum with preset power and period and delivering or sampling agent**

Patent Assignee: ALZA CORP (ALZA ); JOHNSON & JOHNSON (JOHJ ); CORMIER M J N (CORM-I); DADDONA P E (DADD-I); KEENAN R L (KEEN-I); LIN W (LINW-I); MATRIANO J A (MATR-I); SAMIEE A P (SAMI-I); TRAUTMAN J C (TRAU-I)

Inventor: CORMIER M J N ; DADDONA P E ; KEENAN R L ; LIN W ; MATRIANO J A ; SAMIEE A P ; TRAUTMAN J C ; MATRIANOO J A ; LIN W Q

Number of Countries: 098 Number of Patents: 018

Patent Family:

Patent No	Kind	Date	Applicat No	Kind	Date	Week
WO 200230301	A1	20020418	WO 2001US31936	A	20011012	200249 B
AU 200196828	A	20020422	AU 200196828	A	20011012	200254
US 20020123675	A1	20020905	US 2000240307	P	20001013	200260
			US 2001976798	A	20011012	
NO 200301681	A	20030613	WO 2001US31936	A	20011012	200351
			NO 20031681	A	20030411	

EP 1341453	A1	20030910	EP 2001977734	A	20011012	200367
			WO 2001US31936	A	20011012	
CZ 200301037	A3	20031015	WO 2001US31936	A	20011012	200374
			CZ 20031037	A	20011012	
KR 2003068136	A	20030819	KR 2003705187	A	20030412	200382
BR 200114629	A	20040121	BR 200114629	A	20011012	200409
			WO 2001US31936	A	20011012	
HU 200303558	A1	20040128	WO 2001US31936	A	20011012	200415
			HU 20033558	A	20011012	
JP 2004510535	W	20040408	WO 2001US31936	A	20011012	200425
			JP 2002533750	A	20011012	
CN 1479590	A	20040303	CN 2001820464	A	20011012	200436
ZA 200303633	A	20040728	ZA 20033633	A	20030512	200466
NZ 525294	A	20050225	NZ 525294	A	20011012	200519
			WO 2001US31936	A	20011012	
IN 200300453	P2	20041218	IN 2003KN453	A	20030411	200531
MX 2003003299	A1	20050201	WO 2001US31936	A	20011012	200564
			MX 20033299	A	20030414	
US 20050234401	A1	20051020	US 2001976798	A	20011012	200569 N
			US 200592202	A	20050328	
AU 2001296828	B2	20051124	AU 2001296828	A	20011012	200606
RU 2275871	C2	20060510	WO 2001US31936	A	20011012	200634
			RU 2003110431	A	20011012	

Priority Applications (No Type Date): US 2000240307 P 20001013; US  
2001976798 A 20011012; US 200592202 A 20050328

Patent Details:

Patent No	Kind	Lan	Pg	Main IPC	Filing Notes
-----------	------	-----	----	----------	--------------

WO 200230301	A1	E	31	A61B-017/20	
--------------	----	---	----	-------------	--

Designated States (National): AE AG AL AM AT AU AZ BA BB BG BR BY BZ CA  
CH CN CO CR CU CZ DE DK DM DZ EC EE ES FI GB GD GE GH GM HR HU ID IL IN  
IS JP KE KG KP KR KZ LC LK LR LS LT LU LV MA MD MG MK MN MW MX MZ NO NZ  
PH PL PT RO RU SD SE SG SI SK SL TJ TM TR TT TZ UA UG UZ VN YU ZA ZW

Designated States (Regional): AT BE CH CY DE DK EA ES FI FR GB GH GM GR  
IE IT KE LS LU MC MW MZ NL OA PT SD SE SL SZ TR TZ UG ZW

AU 200196828	A			A61B-017/20	Based on patent WO 200230301
US 20020123675	A1			A61B-005/00	Provisional application US 2000240307
NO 200301681	A			A61B-000/00	
EP 1341453	A1	E		A61B-017/20	Based on patent WO 200230301
					Designated States (Regional): AL AT BE CH CY DE DK ES FI FR GB GR IE IT LI LT LU LV MC MK NL PT RO SE SI TR
CZ 200301037	A3			A61B-017/20	Based on patent WO 200230301
KR 2003068136	A			A61B-017/20	
BR 200114629	A			A61B-017/20	Based on patent WO 200230301
HU 200303558	A1			A61B-017/20	Based on patent WO 200230301
JP 2004510535	W	45		A61M-037/00	Based on patent WO 200230301
CN 1479590	A			A61B-017/20	
ZA 200303633	A	34		A61B-000/00	
NZ 525294	A			A61B-017/20	Based on patent WO 200230301
IN 200300453	P2			A61B-017/20	
MX 2003003299	A1			A61B-017/20	Based on patent WO 200230301
US 20050234401	A1			A61M-005/00	Div ex application US 2001976798
AU 2001296828	B2			A61B-017/20	Based on patent WO 200230301
RU 2275871	C2			A61B-017/20	Based on patent WO 200230301

Abstract (Basic): WO 200230301 A1

Abstract (Basic):

NOVELTY - The agent is delivered or sampled through micro-slit of

one or more **stratum corneum** comprised in a **microprotrusion** unit. The micro-slit(s) are formed through **stratum corneum** by causing the **microprotrusions** (80) to impact the **stratum corneum** with at least 0.05 joules /cm<sup>2</sup> of the **microprotrusion** unit in 10 ms or less and agent is delivered or sampled through the microslits.

DETAILED DESCRIPTION - INDEPENDENT CLAIMS are included for the following:

(1) device for forming one or more microslits through **stratum corneum**; and

(2) device for impacting micro-protrusion unit.

USE - For applying penetrating unit to **stratum corneum** by impact for improving transport of agent across **skin**.

ADVANTAGE - The method enables applying of micro-protrusion unit includes several micro-protrusions with impact. The piercing of **skin** with micro-protrusions improves transport of agent across **skin**. The maximum amount of energy delivered has been determined based on the balance between the use of additional energy to achieve additional blade penetration and a desire to prevent discomfort (e.g. pain and bruising) caused by impacting the **stratum corneum** with the micro-protrusion unit.

DESCRIPTION OF DRAWING(S) - The figure shows the perspective view of an applicator device.

Micro-protrusions (80)

pp; 31 DwgNo 4/7

International Patent Class (Main): A61B-000/00; A61B-005/00; A61B-017/20; A61M-005/00; A61M-037/00

International Patent Class (Additional): A61B-010/00; A61M-035/00; A61N-001/30

15/3,AB,IC/3 (Item 2 from file: 349)

DIALOG(R)File 349:PCT FULLTEXT

(c) 2006 WIPO/Univentio. All rts. reserv.

00896620

**MICROPROTRUSION MEMBER RETAINER FOR IMPACT APPLICATOR**

**LOGEMENT POUR ELEMENT A MICROPROTRUSIONS POUR APPLICATEUR A PERCUSSION**

Patent Applicant/Assignee:

ALZA CORPORATION, 1900 Charleston Road, P.O. Box 7210, M10-3, Mountain View, CA 94039-7210, US, US (Residence), US (Nationality)

Inventor(s):

**TRAUTMAN Joseph C** , 1574 Wright Avenue, Sunnyvale, CA 94087, US,

**KEENAN Richard L** , 14711 Fruitvale Avenue, Saratoga, CA 95070, US

Legal Representative:

BATES Owen J (et al) (agent), Alza Corporation, 1900 Charleston Road, P.O. Box 7210, M10-3, Mountain View, CA 94039-7210, US,

Patent and Priority Information (Country, Number, Date):

Patent: WO 200230300 A2-A3 20020418 (WO 0230300)

Application: WO 2001US31837 20011012 (PCT/WO US0131837)

Priority Application: US 2000240379 20001013

Designated States:

(Protection type is "patent" unless otherwise stated - for applications prior to 2004)

AE AG AL AM AT AU AZ BA BB BG BR BY BZ CA CH CN CO CR CU CZ DE DK DM DZ  
EC EE ES FI GB GD GE GH GM HR HU ID IL IN IS JP KE KG KP KR KZ LC LK LR  
LS LT LU LV MA MD MG MK MN MW MX MZ NO NZ PH PL PT RO RU SD SE SG SI SK  
SL TJ TM TR TT TZ UA UG UZ VN YU ZA ZW

(EP) AT BE CH CY DE DK ES FI FR GB GR IE IT LU MC NL PT SE TR  
(OA) BF BJ CF CG CI CM GA GN GQ GW ML MR NE SN TD TG  
(AP) GH GM KE LS MW MZ SD SL SZ TZ UG ZW  
(EA) AM AZ BY KG KZ MD RU TJ TM

Main International Patent Class (v7): A61B-017/20

International Patent Class (v7): A61M-037/00

Publication Language: English

Filing Language: English

Fulltext Word Count: 5564

English Abstract

A retainer (34) is provided for holding a **microprotrusion** member (44) for application of the **microprotrusion** member (44) to the **stratum corneum** with an impact applicator (10). The **microprotrusion** member (44) includes a plurality of **microprotrusions** (90) which penetrate the **stratum corneum** to improve transport of an agent across the **stratum corneum**.

20/3,AB,IC/1 (Item 1 from file: 350)

DIALOG(R)File 350:Derwent WPIX

(c) 2006 The Thomson Corp. All rts. reserv.

014623437

WPI Acc No: 2002-444141/200247

XRAM Acc No: C02-126444

XRPX Acc No: N02-349922

**Applicator for use in transdermal delivery of peptides, has releasing mechanism to move piston downwards and latching mechanism to move piston upwards, which are operated by single hand**

Patent Assignee: ALZA CORP (ALZA ); JOHNSON & JOHNSON (JOHJ ); CAO M T (CAOM-I); KEENAN R L (KEEN-I); TRAUTMAN J C (TRAU-I)

Inventor: CAO M T; **KEENAN R L** ; **TRAUTMAN J C** ; CAO T; KEENAN L; TRAUTMAN C; KENAN R L; TRAUTEMAN J C

Number of Countries: 098 Number of Patents: 020

Patent Family:

Patent No	Kind	Date	Applicat No	Kind	Date	Week
WO 200230281	A1	20020418	WO 2001US31935	A	20011012	200247 B
US 20020087182	A1	20020704	US 2000240436	P	20001013	200247
			US 2001976763	A	20011012	
AU 200196827	A	20020422	AU 200196827	A	20011012	200254
NO 200301682	A	20030613	WO 2001US31935	A	20011012	200351
			NO 20031682	A	20030411	
EP 1341442	A1	20030910	EP 2001977733	A	20011012	200367
			WO 2001US31935	A	20011012	
KR 2003065495	A	20030806	KR 2003705242	A	20030414	200401
BR 200114634	A	20040126	BR 200114634	A	20011012	200412
			WO 2001US31935	A	20011012	
HU 200303583	A1	20040128	WO 2001US31935	A	20011012	200415
			HU 20033583	A	20011012	
JP 2004510530	W	20040408	WO 2001US31935	A	20011012	200425
			JP 2002533731	A	20011012	
CZ 200301035	A3	20040218	WO 2001US31935	A	20011012	200430
			CZ 20031035	A	20011012	
CN 1479588	A	20040303	CN 2001820462	A	20011012	200436
ZA 200303632	A	20040728	ZA 20033632	A	20030512	200466
NZ 525293	A	20050324	WO 2001US31935	A	20030411	200523
			NZ 525293	A	20030411	
IN 200300452	P2	20041218	IN 2003KN452	A	20030411	200531

EP 1341442	B1	20050629	EP 2001977733	A	20011012	200543
			WO 2001US31935	A	20011012	
DE 60111771	E	20050804	DE 111771	A	20011012	200552
			EP 2001977733	A	20011012	
			WO 2001US31935	A	20011012	
MX 2003003301	A1	20050201	WO 2001US31935	A	20011012	200564
			MX 20033301	A	20030414	
ES 2243564	T3	20051201	EP 2001977733	A	20011012	200625
US 20060095061	A1	20060504	US 2000240436	P	20001013	200631
			US 2001976763	A	20011012	
			US 2005251488	A	20051014	
DE 60111771	T2	20060504	DE 111771	A	20011012	200632
			EP 2001977733	A	20011012	
			WO 2001US31935	A	20011012	

Priority Applications (No Type Date): US 2000240436 P 20001013; US 2001976763 A 20011012; US 2005251488 A 20051014

Patent Details:

Patent No	Kind	Lan	Pg	Main IPC	Filing Notes
WO 200230281	A1	E	29	A61B-005/14	
Designated States (National): AE AG AL AM AT AU AZ BA BB BG BR BY BZ CA CH CN CO CR CU CZ DE DK DM DZ EC EE ES FI GB GD GE GH GM HR HU ID IL IN IS JP KE KG KP KR KZ LC LK LR LS LT LU LV MA MD MG MK MN MW MX MZ NO NZ PH PL PT RO RU SD SE SG SI SK SL TJ TM TR TT TZ UA UG UZ VN YU ZA ZW					
Designated States (Regional): AT BE CH CY DE DK EA ES FI FR GB GR IE IT LI LT LU LV MC MK NL OA PT SD SE SL SZ TR TZ UG ZW					
US 20020087182	A1			A61B-017/34	Provisional application US 2000240436
AU 200196827	A			A61M-037/00	Based on patent WO 200230281
NO 200301682	A			A61B-000/00	
EP 1341442	A1	E		A61B-005/14	Based on patent WO 200230281
Designated States (Regional): AL AT BE CH CY DE DK ES FI FR GB GR IE IT LI LT LU LV MC MK NL PT RO SE SI TR					
KR 2003065495	A			A61M-037/00	
BR 200114634	A			A61B-005/14	Based on patent WO 200230281
HU 200303583	A1			A61B-005/145	Based on patent WO 200230281
JP 2004510530	W		41	A61B-017/20	Based on patent WO 200230281
CZ 200301035	A3			A61B-005/145	Based on patent WO 200230281
CN 1479588	A			A61B-005/14	
ZA 200303632	A		38	A61B-000/00	
NZ 525293	A			A61B-005/14	Based on patent WO 200230281
IN 200300452	P2			A61B-005/14	
EP 1341442	B1	E		A61B-005/15	Based on patent WO 200230281
Designated States (Regional): AT BE CH CY DE DK ES FI FR GB GR IE IT LI LU MC NL PT SE TR					
DE 60111771	E			A61B-005/15	Based on patent EP 1341442 Based on patent WO 200230281
MX 2003003301	A1			A61B-005/14	Based on patent WO 200230281
ES 2243564	T3			A61B-005/15	Based on patent EP 1341442
US 20060095061	A1			A61B-017/34	Provisional application US 2000240436 Cont of application US 2001976763
DE 60111771	T2			A61B-005/15	Based on patent EP 1341442 Based on patent WO 200230281

Abstract (Basic): WO 200230281 A1

Abstract (Basic):

NOVELTY - A releasing mechanism makes a spring (20) to bias a piston (14) downwards with respect to a case (12) of an applicator, causing a **microprotrusion** array to impact and pierce the **stratum**



**corneum.** A latching mechanism makes the piston to be pressed upwards making a catch (26) of the piston to engage a latch (30) of the case. The latching and releasing mechanisms permit single handed operations.

DETAILED DESCRIPTION - A device for impacting a penetrating member against the **stratum corneum** comprises a body having two ends, one of which is adapted to receive the penetrating member. A releasing mechanism makes a spring (20) to bias a piston (14) downwards with respect to a case (12) of an applicator, causing a **microprotrusion** array to impact and pierce the **stratum corneum**. A latching mechanism makes the piston to be pressed upwards making a catch (26) of the piston to engage a latch (30) of the case. The latching and releasing mechanisms permit single handed operations.

An INDEPENDENT CLAIM is included for method of cocking the applicator.

USE - For applying patch having an array of **microprotrusions** to the **stratum corneum** layer of the **skin** by impact (claimed), for **transdermal** delivery of peptides and proteins to the human body or for sampling of glucose.

ADVANTAGE - The releasing mechanism and the latching mechanism permit single handed operation of the user and require a minimal hand strength for cocking the applicator. Hence allows the applicator to be used even by patients having neither the strength nor the manual dexterity for cocking the applicator.

DESCRIPTION OF DRAWING(S) - The figure shows a side cross-sectional view of applicator.

Case (12)

Piston (14)

Spring (20)

Catch (26)

Latch (30)

pp; 29 DwgNo 2/7

International Patent Class (Main): A61B-000/00; **A61B-005/14** ;

**A61B-005/145** ; **A61B-005/15** ; A61B-017/20; A61B-017/34; A61M-037/00

International Patent Class (Additional): **A61B-005/155** ; A61M-005/00

**20/3,AB,IC/2** (Item 2 from file: 350)

DIALOG(R)File 350:Derwent WPIX

(c) 2006 The Thomson Corp. All rts. reserv.

013905820

WPI Acc No: 2001-390033/200141

XRAM Acc No: C01-118865

XRPX Acc No: N01-286947

**Expandable skin stretching device for delivering agent through body surface having micropathways comprises agent reservoir, stretching device, and body surface stretching mechanism**

Patent Assignee: ALZA CORP (ALZA ); CORMIER M J N (CORM-I); EDWARDS B P (EDWA-I); KIM H L (KIMH-I); LIM W (LIMW-I); NEUKERMANS A P (NEUK-I);

POUTIATINE A I (POUT-I); SAMIEE A P (SAMI-I); TRAUTMAN J C (TRAU-I)  
Inventor: **CORMIER M J N** ; EDWARDS B P; KIM H L; LIM W; NEUKERMANS A P;  
POUTIATINE A I; **SAMIEE A P** ; **TRAUTMAN J C** ; CORMIER J; KIM L;  
NEUKERMANS P; POUTIATINE I; TRAUTMAN C; CORNIER M J N; POUTIATINE A L;  
SAMICE A P

Number of Countries: 095 Number of Patents: 018

Patent Family:

Patent No	Kind	Date	Applicat No	Kind	Date	Week
-----------	------	------	-------------	------	------	------

WO 200141864	A1	20010614	WO 2000US33582	A	20001207	200141	B
AU 200120870	A	20010618	AU 200120870	A	20001207	200161	
US 20020111600	A1	20020815	US 99172704	P	19991210	200256	
			US 2000733305	A	20001208		
NO 200202721	A	20020807	WO 2000US33582	A	20001207	200265	
			NO 20022721	A	20020607		
EP 1239917	A1	20020918	EP 2000984209	A	20001207	200269	
			WO 2000US33582	A	20001207		
KR 2002060996	A	20020719	KR 2002707426	A	20020610	200305	
HU 200204002	B	20030328	WO 2000US33582	A	20001207	200333	
			HU 20024002	A	20001207		
JP 2003516205	W	20030513	WO 2000US33582	A	20001207	200334	
			JP 2001543208	A	20001207		
CN 1423571	A	20030611	CN 2000818309	A	20001207	200357	
MX 2002005765	A1	20030101	WO 2000US33582	A	20001207	200373	
			MX 20025765	A	20020610		
NZ 519432	A	20040130	NZ 519432	A	20001207	200414	
			WO 2000US33582	A	20001207		
US 20040181203	A1	20040916	US 99172704	P	19991210	200461	
			US 2000733305	A	20001208		
			US 2004794637	A	20040305		
ZA 200204597	A	20040929	ZA 20024597	A	20020607	200468	
EP 1239917	B1	20050511	EP 2000984209	A	20001207	200536	
			WO 2000US33582	A	20001207		
DE 60020159	E	20050616	DE 20159	A	20001207	200540	
			EP 2000984209	A	20001207		
			WO 2000US33582	A	20001207		
AU 782610	B2	20050811	AU 200120870	A	20001207	200558	
ES 2238333	T3	20050901	EP 2000984209	A	20001207	200561	
DE 60020159	T2	20051006	DE 20159	A	20001207	200566	
			EP 2000984209	A	20001207		
			WO 2000US33582	A	20001207		

Priority Applications (No Type Date): US 99172704 P 19991210; US 2000733305  
A 20001208; US 2004794637 A 20040305

Patent Details:

Patent No Kind Lan Pg Main IPC Filing Notes

WO 200141864 A1 E 33 A61M-037/00

Designated States (National): AE AG AL AM AT AU AZ BA BB BG BR BY BZ CA  
CH CN CR CU CZ DE DK DM DZ EE ES FI GB GD GE GH GM HR HU ID IL IN IS JP  
KE KG KP KR KZ LC LK LR LS LT LU LV MA MD MG MK MN MW MX MZ NO NZ PL PT  
RO RU SD SE SG SI SK SL TJ TM TR TT TZ UA UG UZ VN YU ZA ZW

Designated States (Regional): AT BE CH CY DE DK EA ES FI FR GB GH GM GR  
IE IT KE LS LU MC MW MZ NL OA PT SD SE SL SZ TR TZ UG ZW

AU 200120870 A A61M-037/00 Based on patent WO 200141864

US 20020111600 A1 A61M-031/00 Provisional application US 99172704

NO 200202721 A A61M-000/00

EP 1239917 A1 E A61M-037/00 Based on patent WO 200141864

Designated States (Regional): AL AT BE CH CY DE DK ES FI FR GB GR IE IT  
LI LT LU LV MC MK NL PT RO SE SI TR

KR 2002060996 A A61M-037/00

HU 200204002 B A61M-037/00 Based on patent WO 200141864

JP 2003516205 W 37 A61M-035/00 Based on patent WO 200141864

CN 1423571 A A61M-037/00

MX 2002005765 A1 A61B-017/20 Based on patent WO 200141864

NZ 519432 A A61M-037/00 Based on patent WO 200141864

US 20040181203 A1 A61M-031/00 Provisional application US 99172704

Cont of application US 2000733305

ZA 200204597 A 40 A61M-000/00  
EP 1239917 B1 E A61M-037/00 Based on patent WO 200141864  
Designated States (Regional): AT BE CH CY DE DK ES FI FR GB GR IE IT LI  
LU MC NL PT SE TR  
DE 60020159 E A61M-037/00 Based on patent EP 1239917  
Based on patent WO 200141864  
AU 782610 B2 A61M-037/00 Previous Publ. patent AU 200120870  
Based on patent WO 200141864  
ES 2238333 T3 A61M-037/00 Based on patent EP 1239917  
DE 60020159 T2 A61M-037/00 Based on patent EP 1239917  
Based on patent WO 200141864

Abstract (Basic): WO 200141864 A1

Abstract (Basic):

NOVELTY - An expandable **skin** stretching device comprises an agent reservoir placed in agent-transmitting relation with the body surface (30) and micropathways, a stretching device (56, 57) having opposing body surface engaging portions partially surrounding the body surface to be stretched, and a body surface stretching mechanism (72, 73) associated with the engaging portions to apply a tension of 0.01-10 MPa to the body surface during agent delivery.

USE - The device is useful for delivering an agent through a body surface having micropathways.

ADVANTAGE - The apparatus enhances the **transdermal** flux of the agents during **transdermal** delivery, prevents or delays the **skin's** natural healing processes, and maintains and/or enlarges the pathways made in the outermost layer of the body surface.

DESCRIPTION OF DRAWING(S) - The figure shows a top plan view of the **skin** stretching device.

Body surface (30)

Stretching device (56, 57)

Body surface stretching mechanism (72, 73)

pp; 33 DwgNo 1/15

International Patent Class (Main): A61B-017/20; A61M-000/00; A61M-031/00;  
A61M-035/00; A61M-037/00

International Patent Class (Additional): A61B-005/00 ; A61H-001/00;  
A61H-039/00; A61N-001/30

20/3,AB,IC/3 (Item 3 from file: 350)

DIALOG(R) File 350:Derwent WPIX

(c) 2006 The Thomson Corp. All rts. reserv.  
013392480

WPI Acc No: 2000-564418/200052

XRPX Acc No: N00-416828

Agent detecting device includes electrodes at distal tip of each microprotrusion , to be inserted into patient's skin

Patent Assignee: ALZA CORP (ALZA )

Inventor: DADDONA P E ; FIELDSON G T; LIN W ; NAT A S

Number of Countries: 001 Number of Patents: 001

Patent Family:

Patent No	Kind	Date	Applicat No	Kind	Date	Week
US 6091975	A	20000718	US 9853272	A	19980401	200052 B

Priority Applications (No Type Date): US 9853272 A 19980401

Patent Details:

Patent No	Kind	Lan Pg	Main IPC	Filing Notes
-----------	------	--------	----------	--------------

US 6091975 A 9 A61B-005/05

Abstract (Basic): US 6091975 A

Abstract (Basic):

NOVELTY - A plate (6) has several **microprotrusions** (4) which are bent to extend downward from the plane of the plate. Electrodes (14,18) at the distal tip of each **microprotrusion** are inserted into the patient's **skin** in order to contact patient's interstitial fluid.

DETAILED DESCRIPTION - An INDEPENDENT CLAIM is also included for agent detecting method in patient.

USE - For detecting agents such as body electrolytes, glucose, alcohol, pharmaceuticals and illicit drugs in patients.

ADVANTAGE - Eliminates pain and bleeding for a patient, by positioning electro-chemical sensor just below the outermost layer of the **epidermis** but above the patient's nerve endings and blood vessels.

DESCRIPTION OF DRAWING(S) - The figure shows the perspective view of member with **microprotrusions**.

**Microprotrusions** (4)

Plate (6)

Electrodes (14,18)

pp; 9 DwgNo 2/5

International Patent Class (Main): **A61B-005/05**

**20/3,AB,IC/4** (Item 4 from file: 350)

DIALOG(R)File 350:Derwent WPIX

(c) 2006 The Thomson Corp. All rts. reserv.

012151497

WPI Acc No: 1998-568409/199848

XRAM Acc No: C98-170845

XRPX Acc No: N98-442186

**Minimally invasive detector for percutaneous detection of agents - has plate with micro - protrusions carrying electrodes for piercing skin and detecting agent in patient's interstitial fluid**

Patent Assignee: ALZA CORP (ALZA )

Inventor: **DADDONA P E** ; FIELDSON G T; **LIN W** ; NAT A S; DADDONA E;

FIELDSON T; NAT S

Number of Countries: 083 Number of Patents: 009

Patent Family:

Patent No	Kind	Date	Applicat No	Kind	Date	Week
WO 9846124	A1	19981022	WO 98US6851	A	19980403	199848 B
AU 9869536	A	19981111	AU 9869536	A	19980403	199912
EP 1006868	A1	20000614	EP 98915326	A	19980403	200033
			WO 98US6851	A	19980403	
KR 2001006147	A	20010126	KR 99709226	A	19991008	200152
JP 2001523993	W	20011127	JP 98543987	A	19980403	200204
			WO 98US6851	A	19980403	
EP 1006868	B1	20040616	EP 98915326	A	19980403	200439
			WO 98US6851	A	19980403	
DE 69824600	E	20040722	DE 98624600	A	19980403	200450
			EP 98915326	A	19980403	
			WO 98US6851	A	19980403	
ES 2218815	T3	20041116	EP 98915326	A	19980403	200477
DE 69824600	T2	20050818	DE 98624600	A	19980403	200554
			EP 98915326	A	19980403	
			WO 98US6851	A	19980403	

Priority Applications (No Type Date): US 9743851 P 19970411

Patent Details:

Patent No	Kind	Lan	Pg	Main IPC	Filing Notes
WO 9846124	A1	E	21	A61B-005/00	
Designated States (National): AL AM AT AU AZ BA BB BG BR BY CA CH CN CU CZ DE DK EE ES FI GB GE GH GM GW HU ID IL IS JP KE KG KP KR KZ LC LK LR LS LT LU LV MD MG MK MN MW MX NO NZ PL PT RO RU SD SE SG SI SK SL TJ TM TR TT UA UG US UZ VN YU ZW					
Designated States (Regional): AT BE CH CY DE DK EA ES FI FR GB GH GM GR IE IT KE LS LU MC MW NL OA PT SD SE SZ UG ZW					
AU 9869536	A			A61B-005/00	Based on patent WO 9846124
EP 1006868	A1	E		A61B-005/00	Based on patent WO 9846124
Designated States (Regional): AT BE CH DE DK ES FI FR GB GR IE IT LI LU NL PT SE					
KR 2001006147	A			A61B-005/00	
JP 2001523993	W		26	A61B-005/00	Based on patent WO 9846124
EP 1006868	B1	E		A61B-005/00	Based on patent WO 9846124
Designated States (Regional): AT BE CH DE DK ES FI FR GB GR IE IT LI LU NL PT SE					
DE 69824600	E			A61B-005/00	Based on patent EP 1006868
Based on patent WO 9846124					
ES 2218815	T3			A61B-005/00	Based on patent EP 1006868
DE 69824600	T2			A61B-005/00	Based on patent EP 1006868
Based on patent WO 9846124					

Abstract (Basic): WO 9846124 A

An agent below the outermost layer of the **epidermis** of a patient is detected using a device consisting of an electrochemical sensor. This consists of a plate (6) with **skin-piercing micro - protrusions** (4), each carrying an electrode (14, 16, 18) of the sensor.

The sensor is connected to a detector. The **micro - protrusions** are of a length to locate the sensor just below the outermost layer of the **epidermis** above the nerve endings and blood vessels of the patient. The **micro - protrusions** may include hook portions to anchor the device in the body surface. The plate (6) has a through opening (8) which may include a fluid attracting member (not shown), e.g. an osmotic salt layer which produces a flow of fluid past the sensor.

USE - For **percutaneously** detecting agents, e.g. body electrolytes, glucose, alcohol, pharmaceuticals and illicit drugs.

ADVANTAGE - The sensor contacts the patient's interstitial fluids in a minimally invasive manner.

Dwg.2/5

International Patent Class (Main): **A61B-005/00**

International Patent Class (Additional): **A61B-005/0478 ; A61B-005/0492 ; A61B-005/145 ; G01N-027/30 ; G01N-027/327**

File 155:MEDLINE(R) 1951-2006/Jun 19  
(c) format only 2006 Dialog  
File 5:Biosis Previews(R) 1969-2006/Jun W2  
(c) 2006 The Thomson Corporation  
File 73:EMBASE 1974-2006/Jun 19  
(c) 2006 Elsevier Science B.V.  
File 34:SciSearch(R) Cited Ref Sci 1990-2006/Jun W2  
(c) 2006 Inst for Sci Info  
File 434:SciSearch(R) Cited Ref Sci 1974-1989/Dec  
(c) 1998 Inst for Sci Info

Set	Items	Description
S1	3482	AU=(TRAUTMAN J? OR KEENAN R? OR SAMIEE A? OR CORMIER M? OR MATRIANO J? OR DADDONA P?)
S2	11267	AU=LIN W?
S3	75	<b>MICROPROTRUSION?</b> ? OR MICRO()PROTRUSION? ?
S4	10963	<b>JOULE?</b> ? OR J() <b>CM2</b>
S5	5	S1:S2 AND S3
S6	2	S1:S2 AND S4
S7	7	S5:S6
S8	5	RD (unique items)

8/7/1 (Item 1 from file: 5)

DIALOG(R)File 5:Biosis Previews(R)  
(c) 2006 The Thomson Corporation. All rts. reserv.  
0015960505 BIOSIS NO.: 200600305900  
**Device for enhancing transdermal agent flux**  
AUTHOR: Trautman Joseph Creagan ; Kim Hyunok Lynn  
AUTHOR ADDRESS: Sunnyvale, CA USA\*\*USA  
JOURNAL: Official Gazette of the United States Patent and Trademark Office  
Patents OCT 11 2005 2005  
ISSN: 0098-1133  
DOCUMENT TYPE: Patent  
RECORD TYPE: Abstract  
LANGUAGE: English  
ABSTRACT: A device (3) comprising a sheet member (6) having a plurality of **microprotrusions** (4) for penetrating the **skin** and a rigid support (15) contacting and extending across the sheet member (6) for transmitting an applied force evenly across the length and width of the sheet member (6) to reproducibly and reliably penetrate the **skin** with the **microprotrusions** (4).

8/7/2 (Item 2 from file: 5)

DIALOG(R)File 5:Biosis Previews(R)  
(c) 2006 The Thomson Corporation. All rts. reserv.  
0015650601 BIOSIS NO.: 200510345101  
**Microprotrusion member retainer for impact applicator**  
AUTHOR: Trautman Joseph C ; Keenan Richard L  
AUTHOR ADDRESS: Sunnyvale, CA USA\*\*USA  
JOURNAL: Official Gazette of the United States Patent and Trademark Office  
Patents FEB 15 2005 2005  
ISSN: 0098-1133  
DOCUMENT TYPE: Patent  
RECORD TYPE: Abstract  
LANGUAGE: English  
ABSTRACT: A retainer 34 is provided for holding a **microprotrusion** member 44

for application of the **microprotrusion** member 44 to the **stratum corneum** with an impact applicator 10. The **microprotrusion** member 44 includes a plurality of **microprotrusions** 90 which penetrate the **stratum corneum** to improve transport of an agent across the **stratum corneum**.

8/7/3 (Item 3 from file: 5)

DIALOG(R)File 5:Biosis Previews(R)

(c) 2006 The Thomson Corporation. All rts. reserv.

0013005325 BIOSIS NO.: 200100177164

**Minimally invasive detecting device**

AUTHOR: **Daddona Peter E** (Reprint); Fieldson Gregory T; Nat Avtar S; **Lin Wei-Qi**

AUTHOR ADDRESS: Menlo Park, CA, USA\*\*USA

JOURNAL: Official Gazette of the United States Patent and Trademark Office

Patents 1236 (3): July 18, 2000 2000

MEDIUM: e-file

ISSN: 0098-1133

DOCUMENT TYPE: Patent

RECORD TYPE: Abstract

LANGUAGE: English

ABSTRACT: An agent detecting device comprising a plate (6) having a plurality of **microprotrusions** (4) for piercing the **skin** of a patient. Each of the **microprotrusions** (4) having an electrode (14, 16 and 18) thereon for detecting the presence of an agent in the patient's interstitial fluid.

8/7/4 (Item 1 from file: 34)

DIALOG(R)File 34:SciSearch(R) Cited Ref Sci

(c) 2006 Inst for Sci Info. All rts. reserv.

08004360 Genuine Article#: 235PG Number of References: 32

**Title: Interfacial reactions of Co/Si<sub>0.76</sub>Ge<sub>0.24</sub> and**

**Co(Si<sub>0.76</sub>Ge<sub>0.24</sub>)/Si<sub>0.76</sub>Ge<sub>0.24</sub> by pulsed KrF laser annealing**

Author(s): Luo JS (REPRINT) ; Hang YL; Lin WT ; Chang CY; Shih PS

Corporate Source: NATL CHENG KUNG UNIV,DEPT MAT SCI & ENGN/TAINAN

70101//TAIWAN/ (REPRINT); NATL CHIAO TUNG UNIV,DEPT ELECT

ENGN/HSINCHU//TAIWAN/

Journal: JOURNAL OF MATERIALS RESEARCH, 1999, V14, N8 (AUG), P3433-3438

ISSN: 0884-2914 Publication date: 19990800

Publisher: MATERIALS RESEARCH SOCIETY, 506 KEYSTONE DR, WARRENDALE, PA 15086

Language: English Document Type: ARTICLE

Abstract: Interfacial reactions of Co/Si<sub>0.76</sub>Ge<sub>0.24</sub> and

Co(Si<sub>0.76</sub>Ge<sub>0.24</sub>)/Si<sub>0.76</sub>Ge<sub>0.24</sub> by pulsed KrF laser annealing as a function of energy density and pulse number were studied. For the Co/Si<sub>0.76</sub>Ge<sub>0.24</sub> samples annealed at an **energy density of 0.2-0.6 J/cm<sup>2</sup>**, three germanosilicide layers, i.e., amorphous structure and/or nanocrystal, Co(Si<sub>1-x</sub>Gex), and Co(Si<sub>1-x</sub>Gex)<sub>(2)</sub>, were successively formed along the film-depth direction. At 0.3 J/cm<sup>2</sup> Ge segregated to the underlying Si<sub>0.76</sub>Ge<sub>0.24</sub> film, inducing strain relaxation in the residual Si<sub>0.76</sub>Ge<sub>0.24</sub> film. At 0.8 J/cm<sup>2</sup> the reacted region was mostly transformed to a single layer of Co(Si<sub>1-x</sub>Gex)<sub>(2)</sub>, whereas Ge further diffused to the Si substrate. At 1.0 J / cm<sup>2</sup>, constitutional supercooling appeared. Even the Co(Si<sub>0.76</sub>Ge<sub>0.24</sub>) film used as the starting material for laser annealing could not prevent the occurrence

of constitutional supercooling at energy densities  $>1.6 \text{ J / cm}^2$ . The energy densities at which  $\text{Co}(\text{Si}_{1-x}\text{Ge}_x)$  transformation to  $\text{Co}(\text{Si}_{1-x}\text{Ge}_x)_2$ , Ge segregation to the underlying Si, and constitutional supercooling occurred were higher for the  $\text{Co}(\text{Si}_{0.76}\text{Ge}_{0.24})/\text{Si}_{0.76}\text{Ge}_{0.24}$  system than for the  $\text{Co}/\text{Si}_{0.76}\text{Ge}_{0.24}$  system. Higher energy density and/or pulse number enhanced the growth of  $\text{Co}(\text{Si}_{,,,}\text{Ge}_{,,,})$  film. In the present study, the  $\text{Co}/\text{Si}_{0.76}\text{Ge}_{0.24}$  samples subjected to annealing at  $0.2 \text{ J/cm}^2$  for 20 pulses produced a smooth  $\text{Co}(\text{Si}_{,,,}\text{Ge}_{,,,})$  film without inducing Ge segregation out of the germanosilicide and strain relaxation in the unreacted  $\text{Si}_{0.76}\text{Ge}_{0.24}$  film.

8/7/5 (Item 2 from file: 34)

DIALOG(R)File 34:SciSearch(R) Cited Ref Sci

(c) 2006 Inst for Sci Info. All rts. reserv.

07655935 Genuine Article#: BM90P Number of References: 10

**Title: Generation of intense Ni-like X-ray lasers at LULI: from 130 ps to 350 fs pumping pulses**

Author(s): Klisnick A (REPRINT) ; Ros D; Zeitoun P; Albert F; Carillon A; Fourcade P; Hubert S; Jaegle P; Jamelot G; Lewis CLS; MacPhee A; ORourcke R; **Keenan R** ; Nickles P; Janulewicz K; Kalashnikov M; Warwick J; Chanteloup JC; Salmon E; Sauteret C; Zou JP; Joyeux D; Phalippou D

Corporate Source: UNIV PARIS 11,LSAI, BAT 350/F-91405 ORSAY//FRANCE/  
(REPRINT); QUEENS UNIV BELFAST,SCH MATH & PHYS/BELFAST BT7  
1NN/ANTRIM/NORTH IRELAND//; MAX BORN INST,/D-12489 BERLIN//GERMANY//;  
ECOLE POLYTECH,LULI/F-91128 PALAISEAU//FRANCE//; UNIV PARIS  
11,IOTA/F-91403 ORSAY//FRANCE/  
, 1999, V159, P107-114

ISSN: 0951-3248 Publication date: 19990000

Publisher: IOP PUBLISHING LTD, TECHNO HOUSE, REDCLIFFE WAY, BRISTOL BS1  
6NX, ENGLANDINSTITUTE OF PHYSICS CONFERENCE SERIES

Series: INSTITUTE OF PHYSICS CONFERENCE SERIES

Language: English Document Type: ARTICLE

**Abstract:** We compare the results obtained in terms of lasing emission at 13.9 nm in Ni-like silver pumped with different pumping pulse durations. We show that short pulses of the order of 100 ps are necessary to generate significant gain in these ions This induces a transient ionisation dynamics which allows to produce Ni-like ions at high temperature. On the other hand we have extended the transient collisional pumping in Ni-like silver towards ultra-short sub-ps heating pulse, using a new method to generate a travelling wave irradiation. We show that the presence of the travelling wave is essential to extract the X-ray laser photons from the transient gain region., The low pump energy of  $2 \times 5 \text{ Joules}$  used at the target illustrates the high efficiency of this pumping scheme.

[The following references were found during the non-inventor patent search.]

20/7,K/4 (Item 4 from file: 350)

DIALOG(R)File 350:Derwent WPIX

(c) 2006 The Thomson Corp. All rts. reserv.

017071316 \*\*Image available\*\*

WPI Acc No: 2005-395657/200540

**Vaccine delivery system for delivering, e.g. flu vaccines, includes agent formulation containing vaccine, non-electroactive microprojection member**



**having stratum corneum-piercing microprojections, and iontophoresis device**

Patent Assignee: CORMIER M J N (CORM-I); PHIPPS J B (PHIP-I); SUBRAMONY J (SUBR-I); WIDERA G (WIDE-I); ALZA CORP (ALZA )

Inventor: CORMIER M J N; PHIPPS J B; SUBRAMONY J; WIDERA G

Number of Countries: 108 Number of Patents: 002

Patent Family:

Patent No	Kind	Date	Applicat No	Kind	Date	Week
WO 200544366	A2	20050519	WO 2004US34924	A	20041021	200540 B
US 20050123565	A1	20050609	US 2003516184	P	20031031	200540
			US 2004971877	A	20041021	

Priority Applications (No Type Date): US 2003516184 P 20031031; US

2004971877 A 20041021

Patent Details:

Patent No	Kind	Lan	Pg	Main IPC	Filing Notes
-----------	------	-----	----	----------	--------------

WO 200544366	A2	E	58	A61N-000/00	
--------------	----	---	----	-------------	--

Designated States (National): AE AG AL AM AT AU AZ BA BB BG BR BW BY BZ  
CA CH CN CO CR CU CZ DE DK DM DZ EC EE EG ES FI GB GD GE GH GM HR HU ID  
IL IN IS JP KE KG KP KR KZ LC LK LR LS LT LU LV MA MD MG MK MN MW MX MZ  
NA NI NO NZ OM PG PH PL PT RO RU SC SD SE SG SK SL SY TJ TM TN TR TT TZ  
UA UG US UZ VC VN YU ZA ZM ZW

Designated States (Regional): AT BE BG BW CH CY CZ DE DK EA EE ES FI FR  
GB GH GM GR HU IE IT KE LS LU MC MW MZ NA NL OA PL PT RO SD SE SI SK SL  
SZ TR TZ UG ZM ZW

US 20050123565	A1			A61N-001/30	Provisional application US 2003516184
----------------	----	--	--	-------------	---------------------------------------

Abstract (Basic): WO 200544366 A2

NOVELTY - A vaccine delivery system having agent formulation containing vaccine; non-electroactive microprojection member with **stratum corneum**-piercing microprojections; and iontophoresis device having donor electrode, counter electrode, electric circuitry for supplying iontophoresis energy to the electrodes, and donor electrode assembly having electrolyte to separate the donor electrode from the microprojection member, is new.

DETAILED DESCRIPTION - A vaccine delivery system having:

- (a) agent formulation containing vaccine for **transdermal** delivery;
- (b) non-electroactive microprojection member (30) having **stratum corneum**-piercing microprojections; and
- (c) iontophoresis device (10a) comprising donor electrode, counter electrode (15), electric circuitry (20) for supplying iontophoresis energy to the electrodes, and donor electrode assembly (12, 14) having electrolyte to separate the donor electrode from the microprojection member.

An INDEPENDENT CLAIM is also included for **transdermally** delivering a vaccine to a subject, comprising:

- (a) providing an iontophoresis device;
- (b) placing the microprojection member in intimate contact with a patient's **skin** so that microprojections pierces the patient's **stratum corneum**; and
- (c) supplying iontophoresis energy to the electrodes to **transdermally** deliver the vaccine.

USE - For **transdermally** delivering a vaccine, e.g. protein-based vaccine or DNA vaccine, most preferably viruses, weakened viruses, killed viruses, bacteria, weakened bacteria, killed bacteria, protein-based vaccines, polysaccharide-based vaccine, nucleic

acid-based vaccines, proteins, polysaccharide conjugates, oligosaccharides, lipoproteins, Bordetella pertussis (recombinant PT vaccine-acellular), Clostridium tetani (purified, recombinant), Corynebacterium diphtheriae (purified, recombinant), Cytomegalovirus (glycoprotein subunit), Group A streptococcus (glycoprotein subunit, glycoconjugate Group A polysaccharide with tetanus toxoid, M protein/peptides linked to toxin subunit carriers, M protein, multivalent type-specific epitopes, cysteine protease, C5a peptidase), Hepatitis B virus (recombinant Pre S 1, Pre-S2, S, recombinant core protein), Hepatitis C virus (recombinant - expressed surface proteins and epitopes), Human papillomavirus (Capsid protein, TA-GN recombinant protein L2 and E7 (from HPV-6), MEDI-501 recombinant VLP L1 from HPV-11, Quadrivalent recombinant BLP L1 (from HPV-6), HPV-11, HPV16, and HPV-18, LAMP-E7 (from HPV-16)), Legionella pneumophila (purified bacterial surface protein), Neisseria meningitides (glycoconjugate with tetanus toxoid), Pseudomonas aeruginosa (synthetic peptides), Rubella virus (synthetic peptide), Streptococcus pneumoniae (glycoconjugate (1, 4, 5, 6B, 9N, 14, 18C, 19V, 23F) conjugated to meningococcal B OMP, glycoconjugate (4, 6B, 9V, 14, 18C, 19F, 23F) conjugated to CRM197, glycoconjugate (1, 4, 5, 6B, 9V, 14, 18C, 19F, 23F) conjugated to CRM1970, Treponema pallidum (surface lipoproteins), Varicella zoster virus (subunit, glycoproteins), Vibrio cholerae (conjugate lipopolysaccharide), cytomegalo virus, hepatitis B virus, hepatitis C virus, human papillomavirus, rubella virus, Varicella zoster, Bordetella pertussis, Clostridium tetani, Corynebacterium diphtheriae, group A streptococcus, Legionella pneumophila, Neisseria meningitides, Pseudomonas aeruginosa, Streptococcus pneumoniae, Treponema pallidum, Vibrio cholerae, flu vaccines, lyme disease vaccines, rabies vaccines, measles vaccines, mumps vaccines, chicken pox vaccines, small pox vaccines, hepatitis vaccines, pertussis vaccines, diphtheria vaccines, nucleic acids, single-stranded nucleic acids, double-stranded nucleic acids, supercoiled plasmid DNA, linear plasmid DNA, cosmids, bacterial artificial chromosomes (BACs), yeast artificial chromosomes (YACs), mammalian artificial chromosomes, RNA molecules, and mRNA. (All claimed)

**ADVANTAGE** - The system employs iontophoresis process to enhance the vaccine flux into the **skin** and into immunologically relevant **skin** cells.

**DESCRIPTION OF DRAWING(S)** - The figure is a schematic view of the iontophoresis device for **transdermally** delivering a vaccine.

Iontophoresis device (10a)  
Electrode assembly (12, 14)  
Donor electrode (13)  
Counter electrode (15)  
Agent reservoir (16)  
Return reservoir (18)  
Electric circuit (20)  
Microprojection member (30).  
pp; 58 DwgNo 1/7

Derwent Class: A96; B05; B07; D16; D22; P34; S05

International Patent Class (Main): A61N-000/00; A61N-001/30

International Patent Class (Additional): A61K-039/02

**Abstract (Basic):**

**Technology Focus:**

... surface into contact with the microprojection member such that

the microprojection member can strike a **stratum corneum** of a patient with a power of  $0.05 \text{ J / cm}^2$  of microprojection member in at most 10 milliseconds...